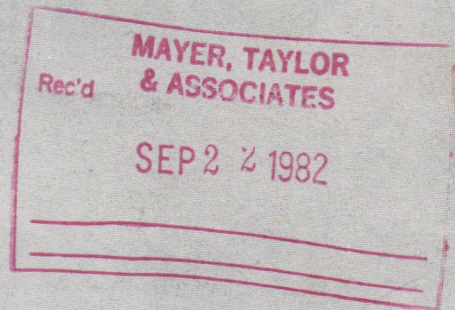


ARCHITECTURE CALIFORNIA

SEPTEMBER • OCTOBER 1982 • CCAIA • VOL. 4, NO. 5





Dealey, Renton & Associates
Insurance Brokers

**Specialists in providing
professional liability
and other
insurance coverages
for
design professionals**

We speak your language because we
talk with architects every working day!

Call Carolyn Isseks at
415/465-3090

P.O. Box 12675 • Oakland, California 94604

CCAIA

California Council, the American
Institute of Architects
1414 K Street, Suite 320
Sacramento, California 95814
(916) 448-9082

Executive Vice President
Paul W. Welch, Jr.
Director, Governmental Relations
Pamela Boyd Williams
Director, Membership Services
Betty Travis

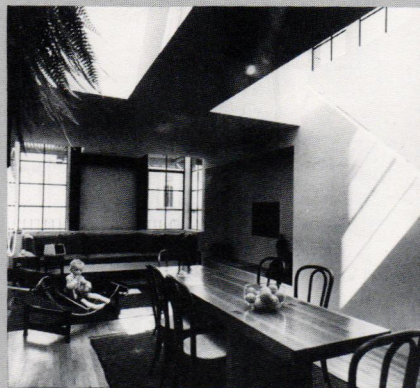
BOARD OF DIRECTORS

President
William E. Patnaude, *AIA*
Vice President/President-Designate
Paul R. Neel, *AIA*
Secretary
Harry Jacobs, *AIA*
Treasurer
Virgil Carter, *AIA*
Vice President/Governmental Relations
Robert E. Allen, *AIA*
Vice President/Professional Development
Lawrence P. Segrue, *AIA*
Vice President/Public Awareness
Richard G. Conklin, *AIA*

AIA Directors

George Bissell, *FAIA*
William Blurock, *FAIA*
Harry C. Hallenbeck, *AIA*
Jon Peter Winkelstein, *FAIA*
Associate Directors
Mary Katharine Randrup (North)
Brian Schnert (South)
Student Director
Andy Dorr
Cabrillo Chapter
Willis R. Hanes, *AIA*
California Central Coast Chapter
Andrew G. Merriam, *AIA*
Central Valley Chapter
Ray Takata, *AIA*
Richard Lewis, *AIA*
East Bay Chapter
Donn Logan, *FAIA*
Harry Haimovitch, *AIA*
Rosemary Muller, *AIA*
Golden Empire Chapter
David Doll, *AIA*
Inland California Chapter
Richard C. Holden, *AIA*
Los Angeles Chapter
Cyril Chern, *AIA*
Martin Gelber, *AIA*
William Landworth, *AIA*
Fred P. Lyman, *AIA*
Kenneth Newman, *AIA*
Alan Rosen, *AIA*
Joseph Vaccaro, *AIA*
Bernard Zimmerman, *FAIA*
Monterey Bay Chapter
Fred Christensen, *AIA*
Orange County Chapter
Sotiros (Sam) Grillias, *AIA*
William C. McCulloch, *AIA*
Thomas B. Moon, *AIA*
Pasadena and Foothill Chapter
Anton Johs, *AIA*
Inge Rose, *AIA*
Redwood Empire Chapter
Edward M. Sohl, Jr., *AIA*
San Diego Chapter
Ralph H. Bradshaw, *AIA*
Richard Paul Buss, *AIA*
Douglas H. Austin, *AIA*
San Francisco Chapter
Richard Broder, *AIA*
Audrey Emmons, *AIA*
Robert H. Hersey, *AIA*
Peter Hockaday, *AIA*
Kenneth Natkin, *AIA*
Christopher Raker, *AIA*
Donald Wudtke, *AIA*
San Joaquin Chapter
Warren D. Thompson, *AIA*
Santa Barbara Chapter
Irwin Sorkin, *AIA*
Santa Clara Valley Chapter
Marvin A. Bamberg, *AIA*
Robert W. Hawley, *AIA*
Ronald Ronconi, *AIA*
Sierra Valley Chapter
Ernie Yoshino, *AIA*
Ventura County Chapter
Eugene Fickes, *AIA*

C O N T E N T S

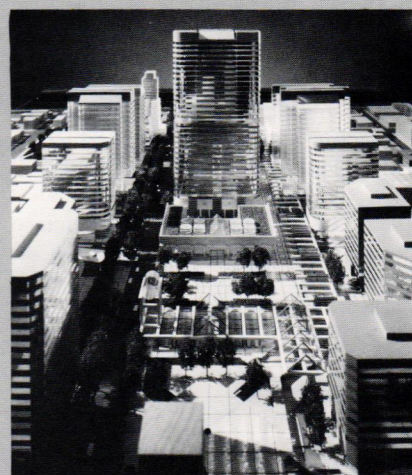


**San Francisco,
the Continuity
of Urban Life** 10
by Daniel Solomon, *FAIA*



**Moscone Center:
The Underground Story,**
14 by Patrick MacLeamy, *AIA*
21 Oakland Renaissance,
by Janice Fillip

**San Francisco
Honor Awards** 16



D E P A R T M E N T S

NEWS**LETTERS****FROM THE FLOOR: A**

Candidate's View,
by George Deukmejian

4 ENERGY:

8 Is Energy-Efficiency
Hazardous to Your Health?
by Teri Robinson

28

30

Cover: Victorian Row and Hyatt Hotel in Oakland.
Architect: ELS Design Group. Photographer: Janice Fillip.

Editor
Janice Fillip
Art Director
Tom Glass,
Roosevelt Studios

Editorial Assistants
Cindy Trantham
Rebecca Houser
Teri Robinson
Editorial Board
Joseph Woollett, *AIA*, chair

Ralph Bradshaw, *AIA*
Richard Conrad, *AIA*
Donalee Deffenbach
Harry Jacobs, *AIA*
Donn Logan, *FAIA*
Fred Lyman, *AIA*

Advertising Director
Duke Lynch
541 St. Andrews Dr.
Aptos, CA 95003
(408) 662-0436

Architecture California, an official publication of the California Council, the American Institute of Architects, is published six times a year. Subscriptions: complimentary to CCAIA members; \$18 a year for all others. For subscriptions, write Circulation Department, 1414 K Street, Suite 320, Sacramento, CA 95814. CCAIA is not responsible for statements or opinions expressed in *Architecture California*, nor do such statements necessarily express the view of CCAIA or its committees. © 1982 by CCAIA.

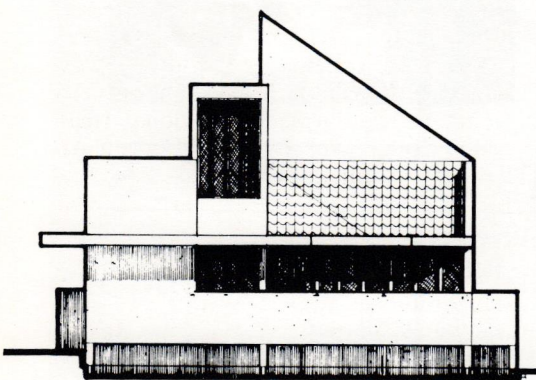
AIASF 100

A century of San Francisco's architectural history will be on display at the San Francisco Museum of Modern Art from October 28, 1982 through January 2, 1983. The exhibit, designed by Michael Manwarring, celebrates the 100th anniversary of the San Francisco Chapter, The American Institute of Architects—the oldest Chapter west of the Mississippi.

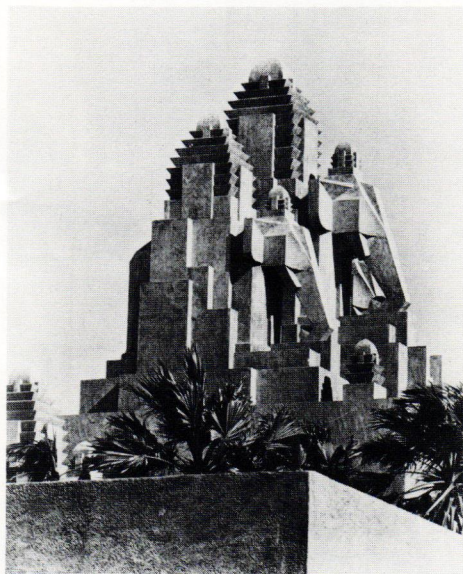
Photographs, artifacts and original drawings are combined in a lively manner to chart the changes in San Francisco's natural and built environments. Current work by Bay Area architects also is displayed.

The exhibit is organized around four themes: pride, utility, home and work, and pleasure. Three-dimensional models symbolizing each of these themes are being built by sculptor Don Potts. The people-oriented exhibit is designed to actively involve museum visitors in AIASF 100.

A party honoring the San Francisco Chapter will be held at the museum on November 5th, to highlight CCAIA's 37th Annual Convention.



Oak Park Inn, a motel, restaurant/convention center and wedding chapel complex, is planned for Grover City near San Luis Obispo on Highway 101. This Cupid's complex will feature the Chapel of the Oaks, a nondenominational wedding chapel placed among 100-year-old oak trees; special bridal suites in the 144 room motel; and wedding reception facilities. The surrounding grounds are sprinkled with streams, ponds and waterfalls designed by landscape architect Ted Elder. Architect: Ruiz Mason Orefico, Pismo Beach.



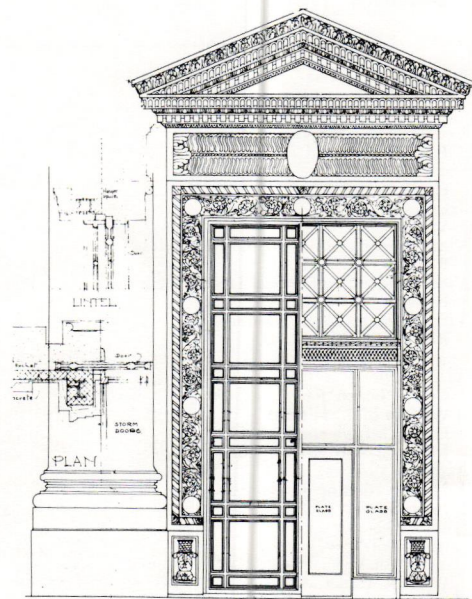
Donald Macky's Art Deco Elephant Towers were built on Treasure Island for the 1939 Golden Gate International Exposition.

Courts Force Release of Solar Bank Funds

The Reagan Administration's impoundment of \$22 million budgeted for the Solar Energy and Energy Conservation Bank was ruled illegal by a U.S. District Court this summer. The ruling settled a suit brought against President Reagan, Office of Management and Budget Director David Stockman and five cabinet secretaries by the Solar Lobby and Natural Resources Defense Council (NRDC) on behalf of interested individuals (including five Congressmen and some would-be users of the Bank).

The Solar Bank was conceived by Congress three years ago to help low- and middle-income homeowners, renters, businessmen and farmers invest in solar and energy-conserving technologies. Last year's appropriation bill directed the Housing and Urban Development secretary immediately to activate the Bank and to "disburse loans and subsidies at the earliest possible date." But Reagan rescinded all but \$225,000 of the \$121 million appropriated for the Bank in 1981, claiming power under the Budget and Impoundment Control Act of 1974.

Congress had agreed to approve the Administration's 1981 rescission if funds were disbursed in 1982, according to Alan



Bliss and Faville's Bank of California (1906-07) on California Street made banking almost a religious rite. The structure has a steel frame with a granite exterior.

Miller of the NRDC. Instead, Reagan rescinded this year's entire budget. At the end of the first half of this fiscal year, when no money had been spent and the Bank's officers had been dismissed, NRDC and the Solar Lobby filed suit.

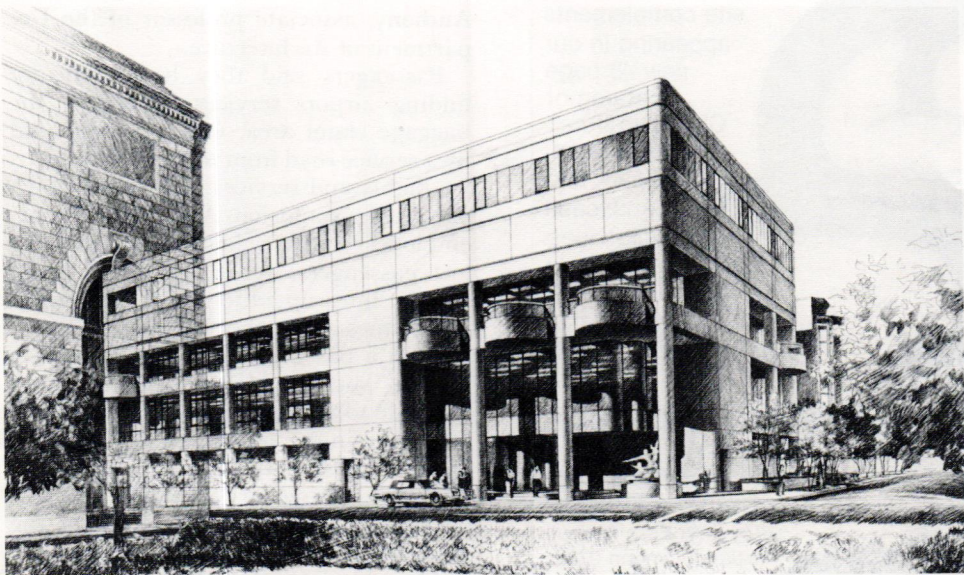
Now, two years after the Bank was scheduled to open, the Court has ruled that disbursement of the 1982 funds must begin.

Shopping Center Trends

Rising costs and new lifestyles are changing shopping center design. These changes should have far reaching impact, since one billion square feet of leasable shopping center space will be developed in the '80s, according to the International Council of Shopping Centers.

Shopping centers of the future will have "hi tech" looks, less parking space and more nonretail facilities, according to Adolfo R. Cruz, AIA whose Pasadena-based firm, McClellan, Cruz, Gaylord & Associates, has designed over 450 shopping centers during its 55 year history.

"Escalating construction costs have prompted developers and owners to require more frugal architectural design approaches," Cruz said. "As a result, the 'hi tech' look, where more structural por-



tions of the buildings are exposed rather than covered, is becoming prevalent."

Cruz predicts that mixed-use shopping centers containing more leisure-time facilities, and even high-rise apartments, will be common in the near future. "Office buildings, hotels, theaters, spas and ice rinks will be included in new centers and added to existing projects that are being remodeled and expanded," Cruz said.



More is never enough.

Joan Mankin Inc., La Jolla

Le Grand Jeté

After ten years of planning, and over 70 design changes, the San Francisco Ballet's new \$10 million home is under construction. Next fall, when the Ballet company leaves its present home in a converted garage, it will be moving into the first completely new building designed for a ballet company in the United States.

The building design by Beverly Willis, FAIA is extremely sensitive to the Ballet's needs. Ballet Co-Director Michael Smuin said, "It was built by the directors, the choreographers, the teachers, the rehearsal pianists—by the people who will use it. We're getting it exactly as we want it."

Located in the heart of San Francisco's thriving cultural center, the Ballet structure had to conform to guidelines set by the Performing Arts Center. The Ballet's neighbors include the War Memorial Opera House, Davies Symphony Hall, San Francisco Museum of Modern Art, City Hall and the Justice Building. Among other requirements, the Ballet building had to be the same height as the Opera House, which is directly across the street from the Ballet's Franklin and Fulton Street location.

Willis designed the building to harmonize with the structures around it. The exterior is pre-cast concrete, matching the color and texture of the Opera House exterior. The heat-absorbing glass windows are similar to those in the Davies Symphony Hall. The building's style, in-

fluenced by a Palladian facade, is "modern with post-modern influences," according to Willis.

Justice Facility Exhibit

Six California projects were selected for the 1982 Exhibition of Architecture for Justice Facilities, sponsored jointly by The American Institute of Architects and the American Correctional Association.

Two projects were cited for their special design features. San Luis Obispo County Government Center, designed by Hope Consulting Group, San Francisco, with associated architect Patrick Sullivan Associates, San Luis Obispo, was cited as a "sensitive addition to an existing group of buildings, both in massing of elements and in formal choices." The jury added that daylighting greatly enhances the public spaces, and the spatial organization recognizes the separation of public, judicial and prisoner circulation.

Kings County Juvenile Center, Hanford, also designed by Patrick Sullivan Associates, was cited as "an attractive short-term residential facility for male and female juveniles. The housing area facilitates classification of residents by security requirements and affords excellent supervision, while program areas are functionally related and easily accessible."

Other projects selected for the 1982 exhibit are Southern Maximum Security Complex, California Correctional Institution, Tehachapi, by VBN/Gruzen Architects Planners, San Francisco and Oakland; Santa Cruz Pretrial Detention Facility, Santa Cruz, by Correction Facility Architects, San Francisco; U.S. Courthouse and Federal Office Building, San Francisco, by Hellmuth, Obata & Kassabaum Inc., San Francisco; and Clark County Detention Center, Las Vegas, also by HOK.

Airport '82

Poor architectural design is resulting in lost and tired passengers and distracted employees in the West Terminal of the San Diego International Airport, according to a Cal Poly University, Pomona study. Several problem areas were pinpointed through interviews with administrators and staff, passenger questionnaires and first-hand observation. The study was conducted by a team of Cal Poly students supervised by Dr. Kathryn

Civic Furniture™

Cast Iron Bench

Here is urban seating without peer. The neo-classic TimberForm® 2120 bench represents Civic Furniture™ of uncompromising quality.

Just one of over 300 site complements appearing in our new 48 page catalog of Civic Furniture™, mall amenities, and park and landscape accessories.

For your personal copy, call

Toll-free 800/547-1940.

TIMBERFORM®

**Columbia Cascade
Timber Company**
1975 S.W. Fifth Avenue
Portland, Oregon 97201
503/223-1157

Anthony, associate professor of the Department of Architecture.

Passengers said they have difficulty finding airport services, especially the baggage claim area, which is separated by a service road from the terminal. Signs for flights and services look alike, which also causes confusion. As a result, airport employees spend a lot of time directing lost passengers. An airline ticket agent may be interrupted to give directions up to 50 times a day, the study showed.

Even a passenger who knows his way travels such a long distance from curbside to airplane that the trip takes at least 10 minutes. Increasing his fatigue, the area around the loading gates lacks sufficient seating, so he must stand or sit on the floor while waiting to enter the plane after the boarding call.

The elderly and disabled do have a place to sit in their own boarding areas. But, since these areas are placed away from other human activity, the passen-



UNIVERSAL MARBLE & ONYX

More
than a
name.

A new source of exclusive colors & sizes of marble, granites & onyx of the highest standards.

UNIVERSAL MARBLE & ONYX's broad base allows for rapid handling of all orders, small or large. Special attention is given to special order items.

Technical advice is available at all stages of any project, and our prices will please you.

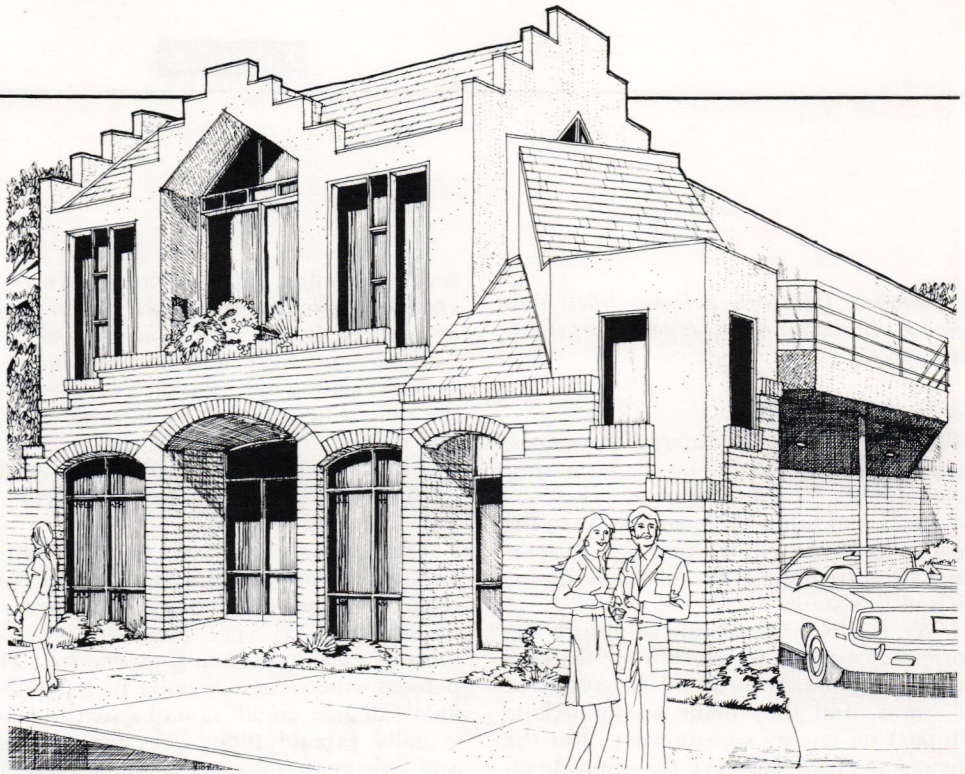
For more information, contact

UNIVERSAL MARBLE & ONYX 442 Ramona, Palo Alto, CA (415) 321-4810

gers often complain of "feeling isolated and pushed aside."

Residential Energy Standards on Hold

Governor Edmund G. Brown, Jr. signed into law Assembly Bill 1843, Greene, which delays the effective date of the Residential Energy Standards. Under the bill, residential energy building standards "...shall not apply to the construction of new residential housing projects which received approval by an advisory agency or other appropriate local agency on or before June 15, 1982, provided application for the permits to construct single-family detached dwellings are submitted or filed on or before June 15, 1983, and application for all other residential building permits are submitted or filed on or before December 31, 1983." All buildings exempt from the new standards still must comply with the standards that were effective prior to July 13, 1982.



This remodel of a nondescript single story building in San Marino into a 3,330 square foot, two story commercial/office structure doubled its leasable space. The modeled brick veneer of the lower level serves as a massive base for the added second level. Angular steel windows, designed specifically for the project, and stucco finish on the second story provide a counterpoint to the arched openings and textured brick base. The Flemish allusions, which reflect the owner's ethnic background, are expressed in the corbiestep gables and steeply pitched roof. Extensive demolition and underpinning of the existing structure were necessary. Architect: Collins & Wraight, Santa Ana.

Once you start using VELUX roof windows, it's difficult to stop.

With over 40 years experience specializing in roof windows and working closely with architects around the world, we've learned a thing or two. In terms of design, function, ease of installation, weather tightness and the availability of a complete program of options, including special glazings, you could not ask for more. Economically priced from about \$200 to \$500, they conform to all major building codes and may be used in passive solar applications.

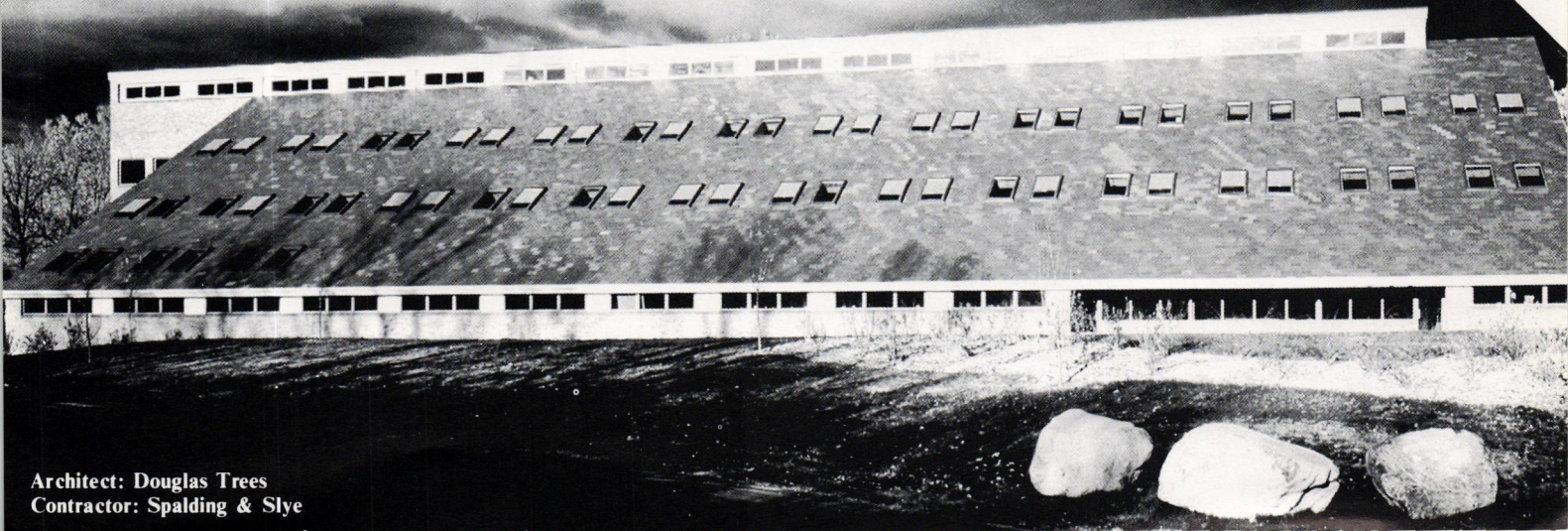
VELUX. The world leader in roof windows and skylights!

VELUX
Roof Windows

VELUX-AMERICA INC.
3584 Arden Rd.
Bay Center Business Park
Hayward, CA 94545
Telephone (415) 887-5666

Name _____
Address _____
City _____
State _____
Zip _____

AC982



Architect: Douglas Trees
Contractor: Spalding & Slye

Architecture California welcomes letters from readers. Letters are subject to editing for clarity and space.

Affordable Energy

The new Residential Energy Standards, which recently were delayed, leave serious doubts in the minds of many architects and other professionals as to the cost-effectiveness of the program with respect to providing basic, necessary housing in this state.

We finally have begun to absorb the original cost and design shock of the 1978 energy standards as standard costs and features, and they made an immediate impact on energy consumption. But the new standards will have the opposite effect. They will add nothing but more consumer-directed construction costs and less affordable housing. The touted energy savings presently are theoretical and unqualified.

The architects in the trenches designing housing have been fighting a very

serious running battle to hold down the cost of housing through good, economical design. With the added burdens of escalating land cost, difficult planning approvals, outrageous planning and building department fees, high interest rates, and higher and higher construction costs, this battle is one that we are losing. And the ultimate losers are the consumers—especially young families.

The future of housing is toward smaller, higher density, multi-family units. No other alternative will keep sales prices earthbound. Yet very small units need more natural light than provided by a 14 percent window area to make them habitable—to give the illusion of space and to visually expand tight areas onto decks and balconies. This was difficult enough with 16–20 percent window areas! The *Uniform Building Code* requires 10 percent minimum glazing simply for health and safety reasons. There is a limit to which the quality of living space should be compromised.

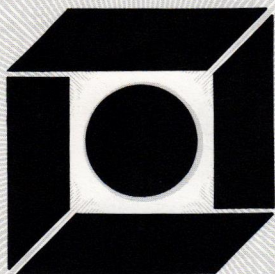
The design of high density multi-fam-

ily units does not permit the luxury of inexpensive alternate energy designs through unit orientation or other passive methods allowed under the new guidelines. Anything over 20 units/acre would allow little flexibility, and we are going to see nothing but 48 to 60 units/acre housing in the affordable range. That is a fact right now.

If you ever have to live in a small, north-facing unit, with 14 percent glazing, especially during winter, you will soon realize that much more energy will be consumed leaving the light on all day because of lack of daylight than will ever be saved by over-designing for heat loss. And what about the psychological effect of minimum outside view?

The fact that California will have the most stringent energy standards in the nation might sound fine politically. Yet, at the expense of livable, affordable housing design for its people, the state is paying a very high price indeed.

*Thomas Menser, AIA
Long Beach*



BLOMBERG WINDOW SYSTEMS

1453 BLAIR AVE · SACRAMENTO · CA · 95822

(916) 428-8060

MANUFACTURING THE FINEST QUALITY WINDOWS AND DOORS

- DURABLE EXTRUDED ALUMINUM FRAME CONSTRUCTION
- ENGINEERED FOR ENERGY EFFICIENCY
- PRIMARY AND SECONDARY LOCKING SYSTEMS
- UNIQUE THERMOSETTING ACRYLIC COLOR FINISHES
- FULLY WEATHERSTRIPPED
- ADJUSTABLE DEPTH THRU-THE-WALL FRAMES
- SPECIAL RETRO-FIT FRAMES FOR REMODELING

GREENHOUSE WINDOWS, SOLARIUMS, SKYLIGHTS, SLIDING GLASS DOORS,
SLIDING WINDOWS, CASEMENT & PROJECTED WINDOWS,
ROUND, ARCHED, & PICTURE WINDOWS, ENTRANCE DOORS & STOREFRONTS

KNOWN FOR CREATIVE DESIGN, QUALITY, AND SERVICE

**AS FEATURED ON THE ISLANDS, FOSTER CITY AND
IN THE ARTHUR D. LITTLE COMPANY, SAN FRANCISCO**

High Quality CAD Graphics

At Affordable Prices



*Priced as shown, \$10,775

DITECHS

***MICROCAD**

Complete Turnkey System • Upward Compatability • Networking

INCLUDES

- Digitizer
- Plotter
- Dual disc drives
- Software

SOFTWARE FEATURES

- User friendly
- Menu driven
- Auto dimensioning
- 63 overlays
- Object groups can be moved, copied, rotated and scaled
- Menuing
- User defined grids (3 Axis)
- Full windowing capabilities
- Many other features

OPTIONS

- 19" color screens
- Up to 36" x 70" plotters
- Up to 48" x 60" digitizers
- Up to 40 MB hard disc

PLUS

- Professional CAD Service Bureau support
- Training
- Software development
- Remote plotting services

Over 5 years of CAD Service Bureau experience to insure the success of your CAD investment.

DITECHS

470 N. Wiget Lane • Walnut Creek, CA 94598 • (415) 930-8762
See us at the CCAIA Convention in San Francisco, Nov 4-7

San Francisco, the Continuity of Urban Life

by Daniel Solomon, FAIA



The typology of streets, courtyards, passages and gardens makes places the subject of memory and makes them beautiful.

Mega-developer Al Taubman once said that he doesn't need demographic studies or market studies or traffic studies when he selects a piece of land on which to build a shopping center. Rich people live on curving streets, he said, and poor people live on straight streets. So whenever there's a piece of vacant land located near curving streets, that's where a shopping center goes. That extraordinary observation about suburban America happens not to be true of San Francisco.

In 1904, Daniel Burnham proposed a new plan for San Francisco, with streets curving along contours of the hills instead of running straight up and down. After the great earthquake and fire of 1906, some streets like Burnham's were built, but, contrary to the vision of Al Taubman, they never became a locus of wealth or of anything else.

The good stuff in San Francisco is on streets that run straight. All the best restaurants, all the interesting neighborhoods, all the truly urban parts of the city are located within an absolutely rigid and uninflected grid first laid out in 1837, by a Swiss engineer named Jean Jacques Vioget, who came to San Francisco from Chile. Vioget applied to San Francisco the pattern of the ideal city developed by the Spanish Crown for its cities in the New World.

The system of land division in San Francisco was the standard Spanish measure of 100 varas by 150 varas (a vara is 2'9"). That block of 275 x 412.5 feet is the characteristic pattern of San Francisco today. Immediately after the Gold Rush, the typical unit of ownership became 10 varas, about

25 feet. This rationalist grid, applied with ruthless constancy to the hilliest city in the world, generated a peculiar local building typology.

The 10 vara grid as a unit of ownership produced a standardized building, two rooms or two bay windows wide, with one entrance for one, two or three dwellings, stepping up and down the hills at an increment corresponding to lot size. A local housing industry grew, repetitively and systematically making balloon frame boxes. Idiosyncratic bases with stairs adapted the boxes to the terrain, and a catalogue of classical ornament decorated the boxes like cakes.

From the outset, San Francisco was a city and never a town. In four years, San Francisco was transformed from a hamlet, with a population of 400, to a city with hotels, three newspapers, restaurants of all types, prostitution, and people who claimed to dress more stylishly than New Yorkers. Settlers living in tents along mud streets erected classical civic buildings with rusticated stone bases. This spirit of urbanism and the physical constancy of building type have been in San Francisco from its beginning, and are deeply intertwined.

The city's typical 275 x 412.5 foot blocks were subdivided further by small-scale land speculators in the 1850s and 1860s. To extract more lots and more housing density from the blocks, networks of alleys, midblock courtyards and tandem houses were created in the midblock within the grid.

In San Francisco, as in many European cities, buildings served as a permeable screen between a public world of streets and a private world of courtyards and gardens. The charac-

teristic urbanism of North Beach, Russian Hill—all the best parts of the city—is the record of small-scale land speculation laid over the original survey. San Francisco's typology of row houses, grids and courts was preserved by tacit understanding for about 110 years. Typology lasted through total upheavals in style—streamlined *moderne* houses conformed to the logic of type as rigorously as Queen Annes, Craftsmen Bungalows and Italianate Victorians.

But, in the late 1950s and early '60s, disruptions in the typology began. The tacit rules started to give way and the physical disintegration of the city was obvious and shocking. Disintegration was caused by many things, but the most vivid and disturbing reason was the planning code itself.

By the early '60s, San Francisco, like most American cities, had enacted progressive planning legislation, a bureaucratic version of the anti-city reform movements of the early part of the century. The ideal cities upon which this legislation was based (Garden City, City Beautiful, Radiant City) were entirely different from the Spanish ideal city of which San Francisco was the realization. The Planning Code of 1961 not only forbade the reproduction of what everybody regarded as the best parts of the city, it nurtured the dismantling. The ideology of the tower-in-the-park adapted to the local scene rewarded developers for the aggregation of contiguous lots and the breakdown of the 10 vara grid.

The malapropisms built in this period caused many people to see new housing as a threat to the city, and "neighborhood preservation" became a political issue in the mayoral election of 1972. A preservation oriented planning commission appointed by the new mayor initiated an interim zoning ordinance in 1973, which, in effect, put the housing industry out of business. It declared a virtual moratorium on construction of new housing by the strict regulation of two issues: density, the number of people buildings could accommodate; and open space, how large buildings could be in relation to their sites.

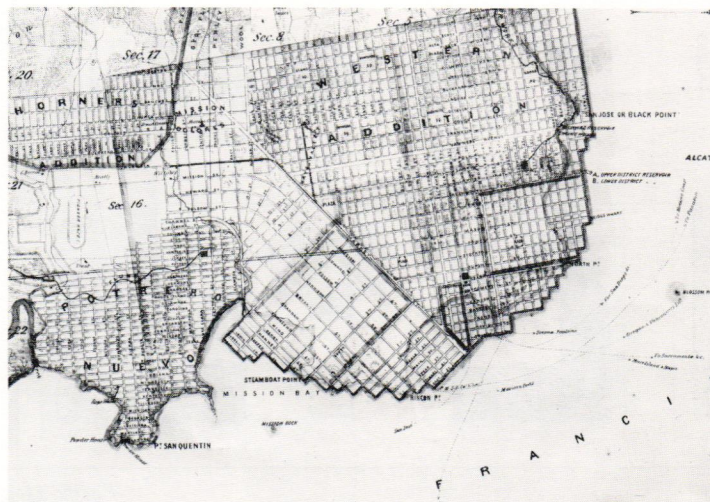
Passions were hot. The sense of outrage at things that were truly outrageous made it difficult to argue that limits on density and promotion of open space were not ways to preserve a city that was neither sparse nor open.

By 1975, it was clear to some within the planning department that the few buildings executed under the new ordinance were even worse than before. Members of the planning staff and the architecture faculty at the University of California, Berkeley forged a collaboration so that students could become engaged in the volatile and messy topic.

We argued that density and lot coverage were the wrong subjects to regulate, that the real issue was typology, and that typological studies, as they had begun to be practiced at a number of schools around the world, could be useful. We produced a set of prototypes to show that density could be accommodated, that lots could be covered almost completely, and that this pervasive fear of building housing was misplaced.

The first prototype consisted of a series of tandem houses which replicated the 1850 pattern. The punitive zoning ordinance of 1973 permitted crackerbox apartments with an open space filling 45 percent of the lot. Our prototype showed a different pattern, covering 75 percent of the lot and incorporating open space within a courtyard. This pattern fit easily with the shift from rental housing to condominium housing happening at that time. Individual townhouse units around a courtyard produced more value than rental apartments in a crackerbox building.

The second item of contention with the planning code, which



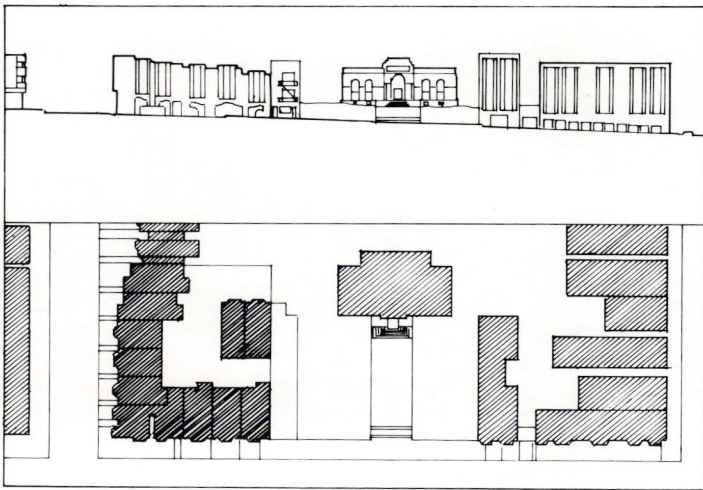
San Francisco, 1861



Traditional housing



Disruption of the typology



Pacific Heights Townhouses



Washington House



valued open space above all else, had to do with the configuration of corner lots. The interim zoning ordinance mandated that open space break the continuity of street walls on corner sites. We proposed that open space be aggregated to midblock space on corner lots, to accommodate not only more density and more lot coverage, but also urban continuity according to the traditional pattern.

Then we looked at some large older buildings that violated the historic pattern of the 10 vara grid, but seemed to fit well next to neighbors that were of the characteristic type. What seemed to make these buildings work was their frequency of entrances and their conformance to a Jane Jacobs vision of street life.

These and several other urban design proposals became the basis of a proposed ordinance to revise the planning code. While working on the ordinance, we got the opportunity to build the Pacific Heights Townhouses, an infill housing project. We used this project to demonstrate all the items of the proposed ordinance. The project is on Sacramento Street, which has a very handsome Palladian library in the middle of the block. Our client's property was a 112 x 127 foot corner site. The interim ordinance produced 12 flats (a total building volume of about 13,000 square feet), with the side of a building facing an important street, and a fragmented pattern of open space.

The proposed zoning produced quite a different pattern, facing a continuous band of buildings toward the major street, with deference to the library as an important monumental

building. The pattern replicated the old 10 vara grid by stepping down the hill at that interval, by providing an entrance at that interval, by limiting the amount of curb cut, and by matching set back and cornice lines of adjacent buildings.

All these urban design devices hold the corner and have a density of detail that replicates the scale of the older buildings. Entrances at 25 foot intervals open into a midblock world where there are two more units. Instead of 13,000 square feet of developable area, this configuration provided 24,000 square feet and created a midblock garden.

If the outside of the building is all about urbanism, the inside is something quite different. The interiors are white, chaste, very compact, and sunlit. They dispel the claustrophobia of living in small spaces by creating open vertical volume. The inspiration for this kind of dwelling, of course, is Corbusier, the antichrist in the cosmology of the new urbanism.

Corb's utopian worker dwellings of the 1920s are based on a vision of 20th century man as a new kind of person—as a rationalist and an athlete—someone whose house is beautiful because it is healthy and because of the intelligence and economy of the resources that are expended on it. For ten years now my intent has been to take Corbusier's athletes and make them into urbanites.

This began in 1972, not as a formulated idea, just as a small building project with a Corb-like unit inserted into the shell of an existing row house. From this beginning came the intent to weave together San Francisco typology and the modernist

dwelling. On the inside, the devices which govern are the open section, the free plan, daylight from the top, rooftop open space, whiteness and austerity of detail. On the outside the buildings are a plain, straightforward rendering of typological information.

In many areas, new zoning, developed from our proposals, permits builders the efficiencies of aggregated lots while imposing the essential features of the 10 vara grid. A row-house/apartment-house hybrid typology results. Washington House illustrates this principle. Washington House, a 100 foot wide rental apartment building, steps down the slope on a 25 foot grid and then provides three separate entrances within the 100 feet. A central lobby serves most of the units, but some are walkups with their own stoops. The building reconstitutes the traditional scale of the city, but is larger, more efficient and provides more housing at less cost than simply subdividing into row houses. The characteristic San Francisco bay windows in this case become south facing solarium to provide heat for the building, serve as indoor gardens, and separate bedrooms from street noise.

Currently we are working on large urban designs based on the principles of the smaller infill housing. The Rincon Hill plan will transform a large area of moribund industrial land into a site for 3,600 housing units. Rincon Hill is an extraordinary place with fabulous views of the bay and of the Bay Bridge, but also with some of the bleakest and least hospitable street scenes in the city.

The reason for the bleakness is interesting. The Market Street diagonal of the San Francisco city map of 1854 is the edge of the original 100 x 150 vara survey. The grid of Rincon Hill always was an anomaly in the San Francisco pattern. The base of Rincon Hill was considered service land for the port, so it had large blocks and large streets. The upper portion of the hill was the setting for luxurious villas built in the 1850s. These also generated a pattern of large blocks and large streets. The difference between the Rincon Hill grid and the grid of North Beach is dramatic.

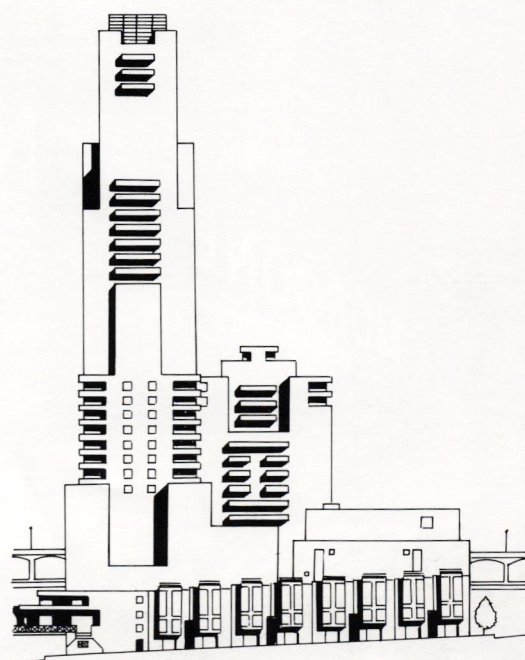
Our plan for Rincon Hill attempts to replicate what happened in the 1850s and '60s—to subdivide this existing oversize grid. The plan provides for narrowing the existing streets, giving title of some public land to private development, creating wider sidewalks through a system of assessments, and designing a new type of alley system which replicates the traditional San Francisco *mise-en-scène*.

The long blocks will be bisected by an alley system, creating midblock open spaces. The alley, lined with what we call "row house camouflage," will serve as a pedestrian link from the cluster of dense highrises at the top of the hill, down through the Hills Brothers landmark building at the bottom of the hill, and across the Embarcadero to Lyndon/Turnbull's beautiful waterfront promenade.

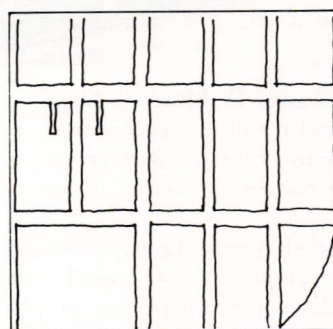
The large residential highrises have their parking structures covered by row houses. These one or two unit row houses step down on a 25 foot grid in the traditional pattern, with an entrance every 25 feet. The tall housing towers are based on a 1916 New York model of stepping skyscrapers, with continuous street walls at the base and a slender silhouette with a stepping profile.

This piece of urbanism, like all of our work, begins with a catalogue of types. Aldo Rossi contends that design begins with classification. The doctrine of typology associated with his teaching has given us a set of tools different from those we were trained with.

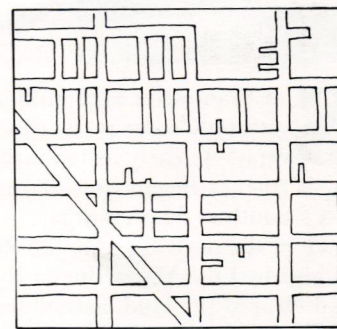
For some architects and critics, our plain rendering is too abstract and inadequate for people who have just lived through



Rincon Hill



Rincon Hill Grid



North Beach Grid

three decades of the sensory deprivation of debased modernism. For me, it is significant that places which are the locus of the most vivid memories of urban life are not particularly interesting pictorially, and there is much to them that is not pictorial. Mostly it is the typology of streets, courtyards, passages, and gardens that makes them the subject of memory and makes them beautiful.

Our work is not unlike that of many people in our generation who are schooled in the formal language and the aspirations of modernism, yet are shocked by the devastation its doctrines have brought to townscapes. Our work departs from the language of modern urbanism, and grows instead from the angry and radical critique of that language, which has evolved in architecture schools throughout the world over the last fifteen years.

For the arrogance and naive optimism of modernist planning, our method substitutes a reverence for an ancient and eternal language—the language of type, of the street, of the loggia, of the gate, of the square and of the garden. In San Francisco, as in all cities with a history, it is typology, with its constancy and its resistance to change, that transforms the actions of individuals into a collective action—the building and rebuilding of the permanent culture of urban life.

Daniel Solomon, FAIA is principal of the San Francisco firm of Daniel Solomon and Associates. The author is indebted to Sally Woodbridge for historical background material and to Anne Vernez-Moudon for her extensive research on San Francisco history.

MOSCONE CENTER

The Underground Story

by Patrick MacLeamy, AIA



San Francisco's \$126 million George R. Moscone Convention Center is the dramatic result of civic controversy. As early as 1955, the San Francisco Redevelopment Agency began considering a convention center in the city's South of Market area.

Over the next 10 years, the Redevelopment Agency formally established the Yerba Buena Redevelopment Area, purchased and cleared the land, assembled developers for private projects, and hired a design team for a proposed convention center. The nature and size of the project, coupled with the forced relocation of South of Market residents to make way for the Center, resulted in a barrage of lawsuits which ultimately caused the failure of the initial attempt to build a convention center.

In 1975, George R. Moscone was elected mayor on a platform to spur development in the Yerba Buena area. After months of work, the voters of San Francisco approved a proposition calling for the development of a convention center in the Yerba Buena area and mandating that the Center be built underground with funds raised by the city's hotel tax.

Mayor Moscone charged Administrative Officer Roger Boas with the responsibility of getting the Center built. Boas hired our firm, Hellmuth, Obata & Kassabaum, to design the Center.

The Design Response

Unlike most convention centers, the Moscone Center is located in the heart of the city on 11 acres bounded by Third, Fourth, Folsom and Howard Streets.

Since the convention center would be predominantly underground, with the lowest floor 30 feet beneath Howard Street, the challenge was to create a space that was not dark and claustrophobic. Great care was taken throughout the design process to provide natural light to the lowest level. The use of bright colors and graphics contribute to the overall light and airy feeling which the architectural detailing was intended to create.

The project's main feature is an underground 261,000 square

foot exhibition hall (the size of six football fields). The hall is designed without any interior columns or pillars, using braced concrete arches such as those in the long-span bridges pioneered by the Swiss engineer Robert Maillart.

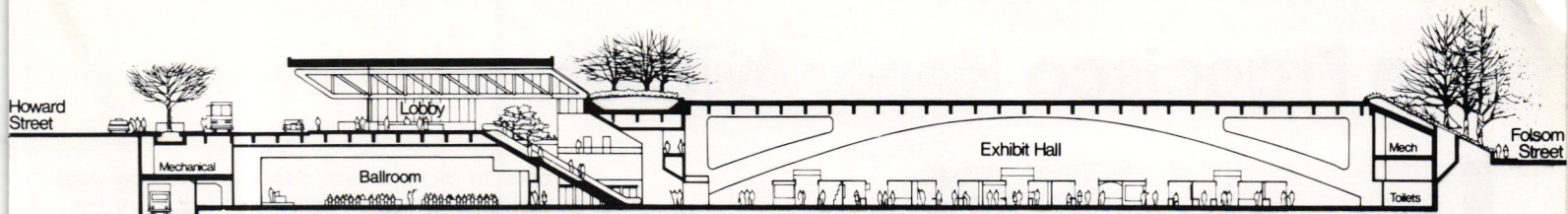
The eight pairs of arches, which span 275 feet, are 37 feet high and are set 60 feet apart along the 800-foot space. This braced arch system not only meets the functional requirements of conventions and exhibits, it also is designed to support future rooftop development which could be comprised of three story steel structures or landscaped areas with moundings of earth up to seven feet thick.

The column-free exhibit hall provides great flexibility in the use of space and creates an expansive, airy feeling which mitigates the potential unpleasant sensation of an underground space. The column-free design also simplifies set-up and dismantling of large exhibits while allowing the exhibit booths to be situated in a variety of configurations. To increase flexibility, the exhibit hall can be divided into three spaces with the use of movable acoustical wall partitions.

Adjacent to the exhibit hall is the lobby and a 30,000 square foot ballroom with a ceiling height of 24 feet 6 inches. The ballroom, which also has movable acoustical wall partitions, can be divided into three sections to permit simultaneous use of the space for lectures, exhibits or banquets. When used as an individual room, the ballroom can hold up to 4,000 people.

The Intermediate Level, 10 feet below Howard Street, provides 34 meeting rooms, lobby space and administrative offices. Its lounge areas overlook the exhibit hall and the three-level lobby space.

The lobby is designed to appear as a "pavilion in the park" and to provide an aboveground identity for the Center. The lobby has four glass walls with its roof supported by tubular steel trusses 120 feet long and 90 feet on center. The hub of the building, the lobby provides direct access to all public areas, functions as the point of control and registration area for the building's users, and permits light to penetrate to the exhibit hall level. The primary circulation system between



the lobby and exhibit hall levels is through the use of six freestanding escalators.

Because the Center can hold up to 27,000 people at any given time, special attention was given to the exits. A maze of stairs and ramps leading from the exhibit and meeting room levels is encased in fireproof concrete exit "tubes"—box beam structural systems used to carry portions of the roof and floor loads, as well as to assure safe and swift exitways. The exiting system is augmented by a full sprinkler system, voice-enunciated emergency egress system and a computer-controlled smoke removal system.

Structural Aspects

To counteract the hydrostatic pressure caused by the location of the main exhibit hall at 10 feet below the natural ground water table, we laid one of the largest mats in the history of modern building construction—over 12,000 cubic yards of cast-in-place concrete, reinforced by 8,000 tons of steel. The mat covers a metropolitan "superblock" of 11 acres, and ranges from 6.4 feet to 13 feet in depth, with an average thickness of 6.8 feet. This foundation anchors the Center's unique concrete-braced arch system.

Fifteen separate cables run in sleeves through the mat between the ends of the arches. In the initial phase of construction, these were loosely strung, like untensed bowstrings. These tendon-like cables then were tightened by a force of 6,000 tons, resulting in a four-inch lift at the crest of each arch where the arch's resistance must be the greatest to counteract "creep" and deflection resulting from the development of future air rights. The sleeves then were filled with a concrete grout to secure the arches in place. These arches are calculated to descend about two inches at their crest over the next 30 years, but the four-inch lift obviously compensates for this two-fold.

Because the Center is located in an earthquake zone, the

exhibit hall arches were subjected to special computer modeling and dynamic analysis tests by our engineers.

Energy Conservation

An underground building has less heat gain and loss through the perimeter walls and the roof. This advantage decreases heating and cooling requirements. The heating and cooling loads of a convention center vary more widely than those of an office or commercial building. For example, during convention set-up and dismantling, few people are in the building and the demand for heating and cooling is very low. The demand is appropriately higher during meetings and conventions. Since the HVAC is zoned so that particular areas of the building can be isolated, an estimated savings of 25 percent of the total energy cost of heating and cooling the Center will be realized in comparison with a similar building above ground.

Despite all the controversy, the Moscone Convention Center was completed on schedule and within budget, factoring in inflation and updated requirements for additional fire safety. Since its opening in December 1981, the Center has attracted over 35 conventions and expositions, exceeding all initial predictions for occupancy. To date, the Moscone Convention Center has received an Award of Honor for Design Excellence from the San Francisco Chapter of The American Institute of Architects, an Award of Merit from the Northern California Chapter of the American Concrete Institute and an Award of Excellence from the American Society of Illuminating Engineers.

Patrick MacLeamy, AIA is a managing principal of the San Francisco office of Hellmuth, Obata & Kassabaum, Inc. He was the project manager for the George R. Moscone Convention Center. Members of the HOK design team included Gyo Obata, FAIA, William E. Valentine, AIA, Robert E. Stauder, AIA, and Terri Richert, AIA.



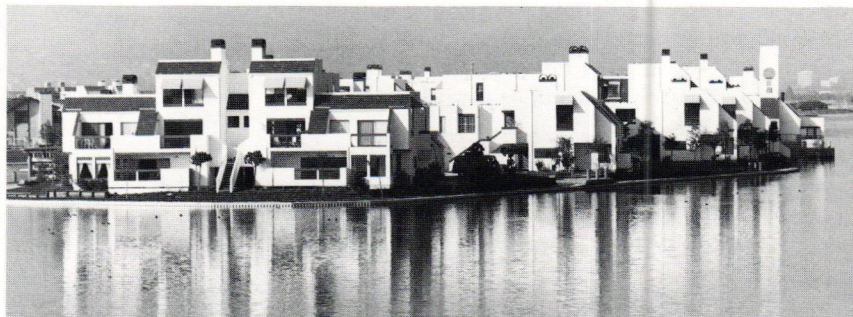
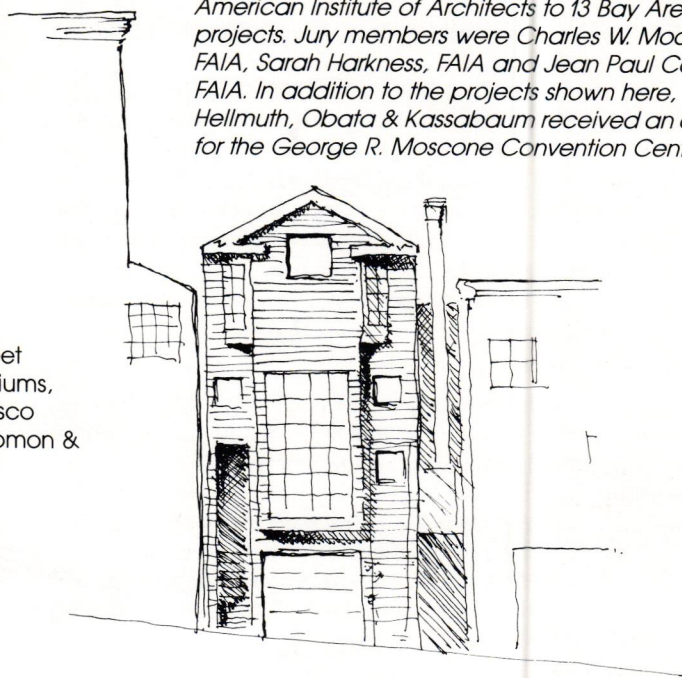
San Francisco Honor Awards



Henry Bowles

Glover Street
Condominiums,
San Francisco
Daniel Solomon &
Associates

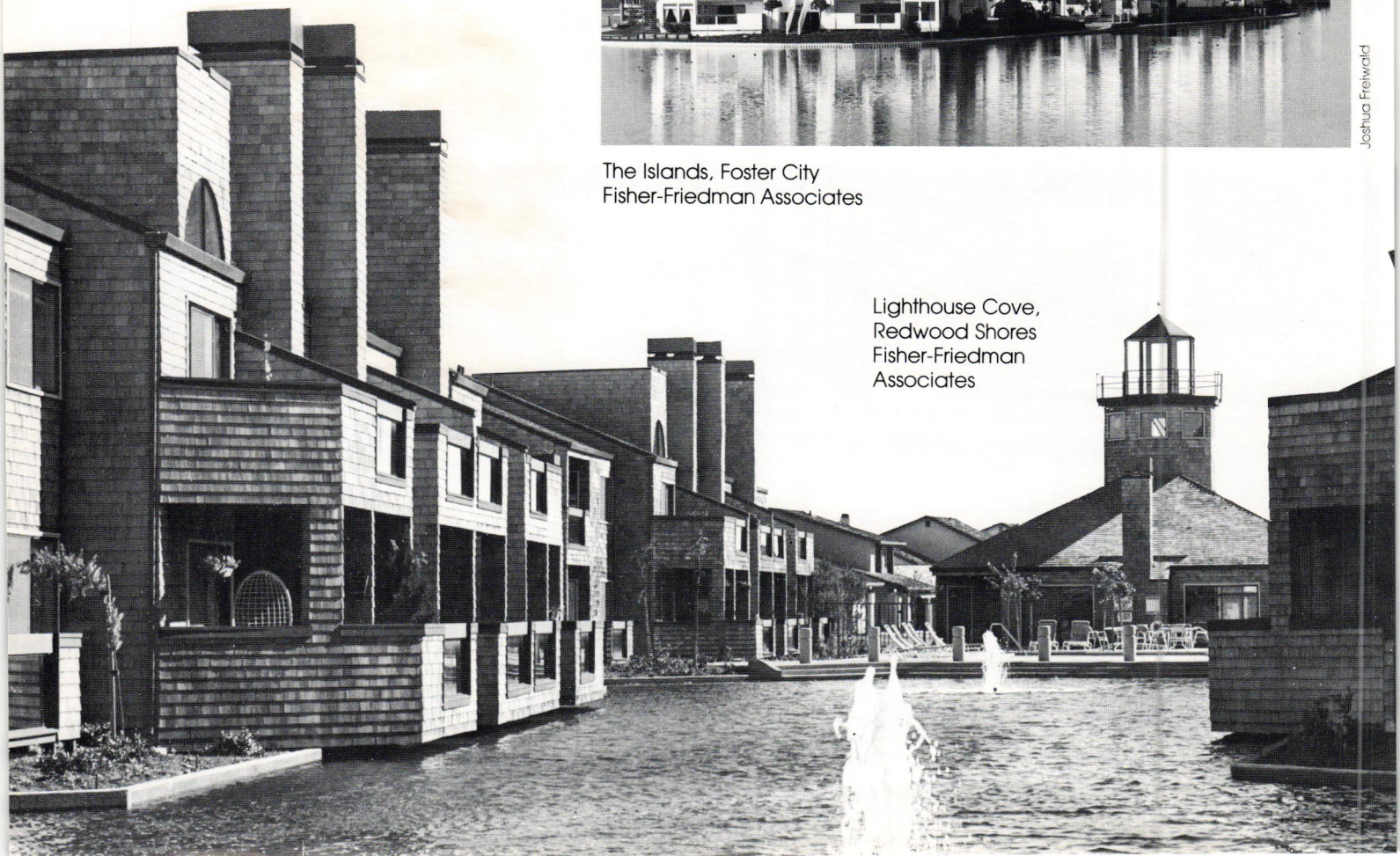
Awards for architectural design excellence were presented by the San Francisco Chapter of The American Institute of Architects to 13 Bay Area projects. Jury members were Charles W. Moore, FAIA, Sarah Harkness, FAIA and Jean Paul Carlian, FAIA. In addition to the projects shown here, Hellmuth, Obata & Kassabaum received an award for the George R. Moscone Convention Center.



Joshua Freiwald

The Islands, Foster City
Fisher-Friedman Associates

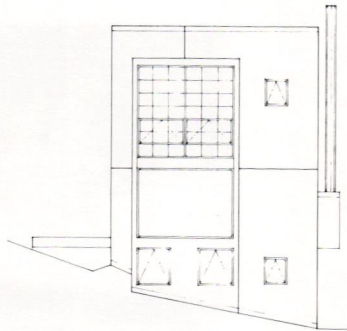
Lighthouse Cove,
Redwood Shores
Fisher-Friedman
Associates



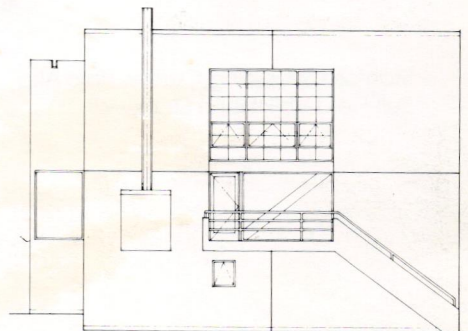


House Near Napa
Jared Carlin, AIA and Alexander Seidel, AIA

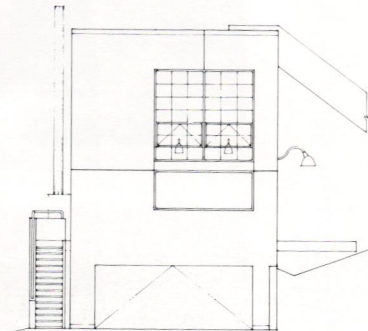
Gerald Ratto



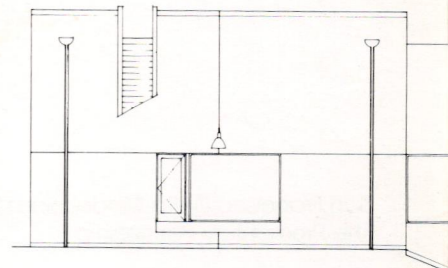
S



E



N

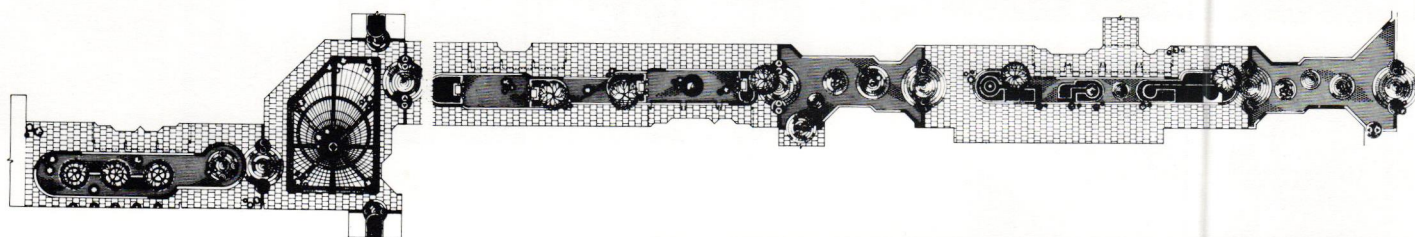


W

McDonald's Restaurant,
Palo Alto
Bull Field Volkmann
Stockwell



Julius Shulman

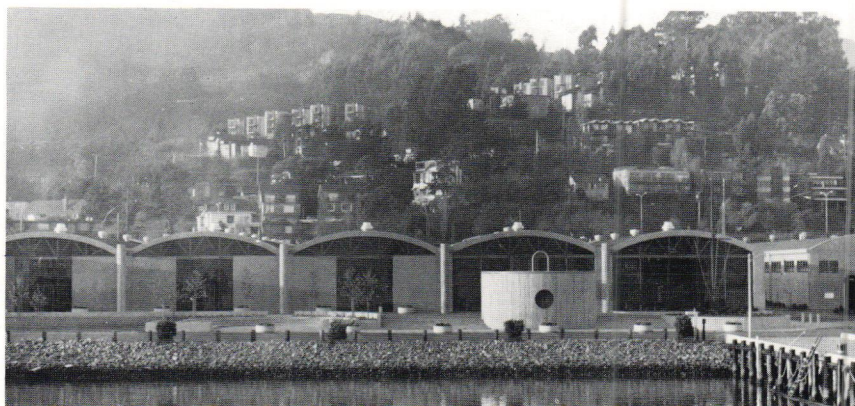


Stanford Shopping Center, Palo Alto
Bull Field Volkmann Stockwell



Julius Shulman

San Francisco Delta Model, Sausalito
The Promontory Partnership



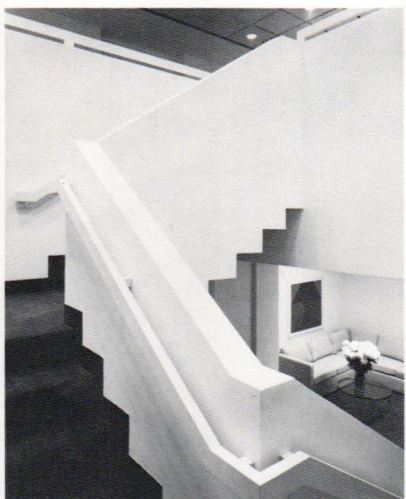


William Ziegler

Saratoga Community Library, Saratoga
Spencer Associates



William Ziegler



Esto Photographics Inc.

Arthur D. Little, San Francisco
Environmental Planning & Research, Inc.

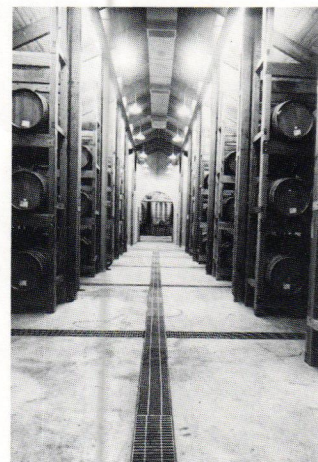
Fisher Winery, Santa Rosa
MLTW/Turnbull Associates



Buena Vista Winery Restoration of
Agoston Haraszthy's Press House, Sonoma
Reiner Keller, AIA



Cakebread Winery,
Oakville
MLTW/Turnbull
Associates



Oakland Renaissance

by Janice Fillip

Used to be, you could drive for miles looking for downtown Oakland. Now you know when you're there. You can't miss the pile drivers.

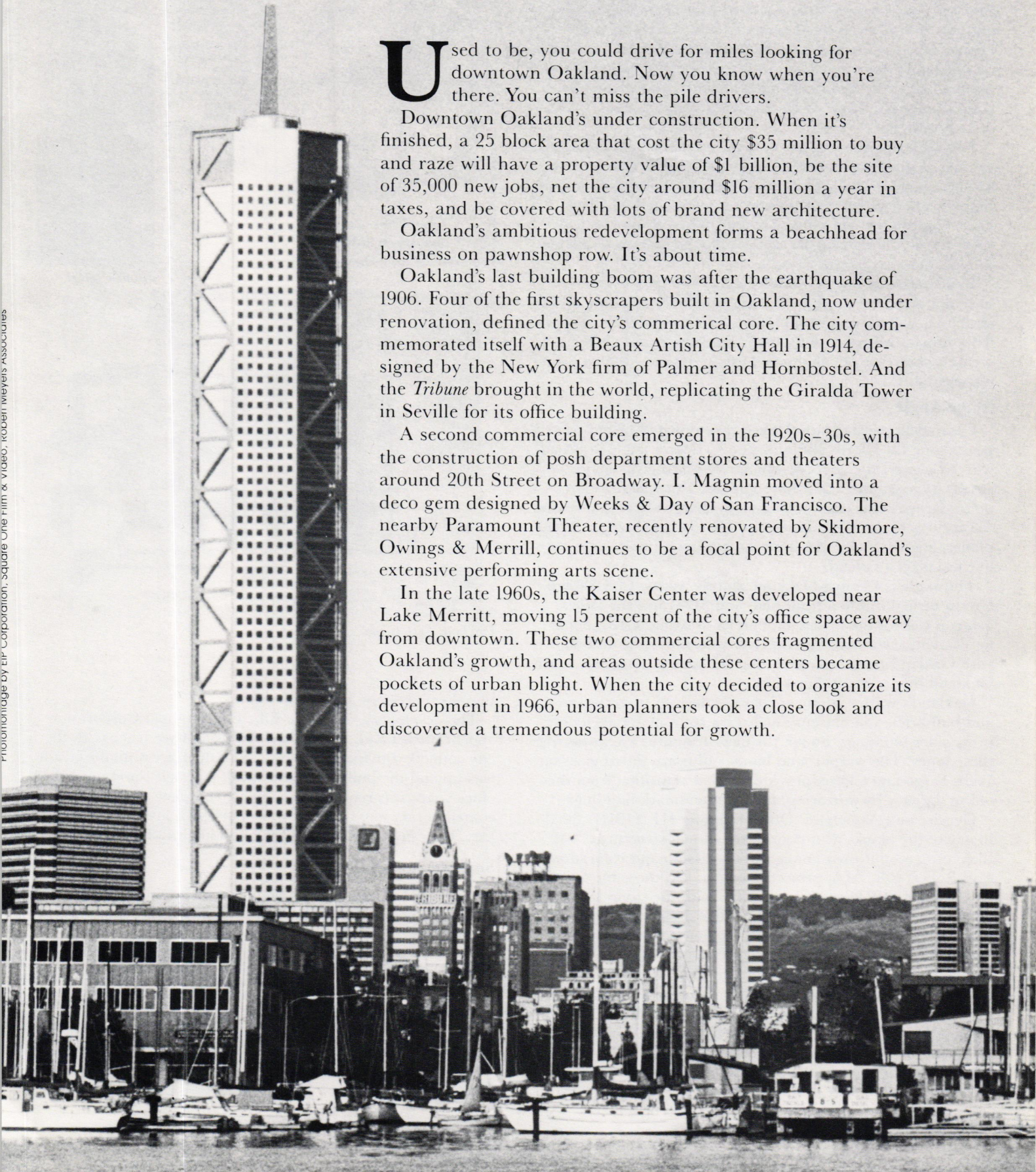
Downtown Oakland's under construction. When it's finished, a 25 block area that cost the city \$35 million to buy and raze will have a property value of \$1 billion, be the site of 35,000 new jobs, net the city around \$16 million a year in taxes, and be covered with lots of brand new architecture.

Oakland's ambitious redevelopment forms a beachhead for business on pawnshop row. It's about time.

Oakland's last building boom was after the earthquake of 1906. Four of the first skyscrapers built in Oakland, now under renovation, defined the city's commerical core. The city commemorated itself with a Beaux Artish City Hall in 1914, designed by the New York firm of Palmer and Hornbostel. And the *Tribune* brought in the world, replicating the Giralda Tower in Seville for its office building.

A second commercial core emerged in the 1920s-30s, with the construction of posh department stores and theaters around 20th Street on Broadway. I. Magnin moved into a deco gem designed by Weeks & Day of San Francisco. The nearby Paramount Theater, recently renovated by Skidmore, Owings & Merrill, continues to be a focal point for Oakland's extensive performing arts scene.

In the late 1960s, the Kaiser Center was developed near Lake Merritt, moving 15 percent of the city's office space away from downtown. These two commercial cores fragmented Oakland's growth, and areas outside these centers became pockets of urban blight. When the city decided to organize its development in 1966, urban planners took a close look and discovered a tremendous potential for growth.



The Oakland Central District Plan of 1966 advocated unabashed development of the city's commercial core. Investors agreed that was a good idea. "Oakland is probably one of the most accessible spots in North America from an urban planning point of view," says William A. Bodrug, vice president of the Canadian investment firm, Bramalea Ltd. "It is the absolutely logical place to be."

All roads lead through Oakland. The Port of Oakland is the west coast's largest containerized cargo handling facility, and the U.S. Navy is in Alameda to stay. A freeway interchange connects northern California's principal road systems on Oakland's doorstep. The airport serves national and international carriers. And Oakland is the only spot in the Bay Area where all the lines of the Bay Area Rapid Transit (BART) system converge.

People fleeing the high cost of housing in San Francisco are settling in the East Bay, where a home can still be found for \$50,000, ungentrified. With prime office space in San Francisco topping \$40 a square foot, businesses were quick to follow, drawn by commercial rents averaging \$25 a square foot. By 1990, the 6.5 million square feet of office space now available in Oakland is expected to triple.

Building those spaces, architects have an unusual chance to sculpt an entire downtown from scratch, at one time. Their structures will shape a community's future and define its spirit. That impact will last a long time. The opportunity is there to create a showcase of enlightened urban design—and so is the responsibility.

Acute Angle

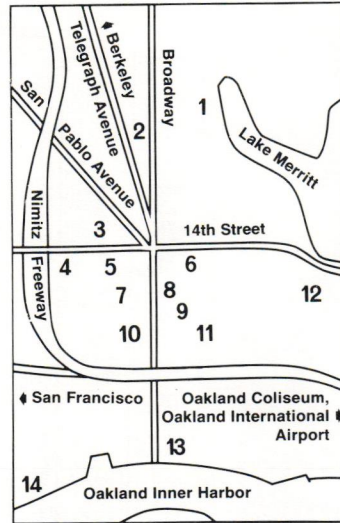
Cesar Pelli permanently altered downtown Oakland by positioning the Clorox Building at a 45 degree angle to Broadway, to suggest the angle at which two of the city's major streets intersect the main thoroughfare. To underscore the point, Gruen Associates, with Pelli in charge of design, treated the corners of the Wells Fargo and Clorox Buildings as broad planes, angled 45 degrees from the buildings' main surfaces, like facets on a crystal.

The angle is keeping Oakland slightly askew. ELS Design Group turned it into a trapezoid, and SOM has the tallest octagon west of the Mississippi on its drawing board. Some local architects criticize as capricious this messing around with Oakland's grid, charging that the raging diagonals cause Oakland to lose the feel of a city.

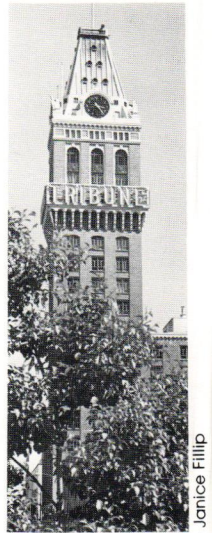
Oakland's warm palette of colors is derived from the dark and buff brick, tan masonry and terra cotta materials found in its older buildings. So far, the new structures are respecting these tones. The wraparound bands of bronze tinted glass on Wells Fargo and Clorox provide a visual transition from the old to the new by mirroring the city's landmark buildings.

Gensler and Associates' Office Building III (OBIII) filled in one of the blanks next door to the Gruen structures. "We took into account their configuration, design and coloration," says Robert Pilc, AIA, project manager. "At the same time, we designed OBIII to be compatible with the stone and masonry construction of City Hall. The design bridges these eclectic buildings and works with the new convention center."

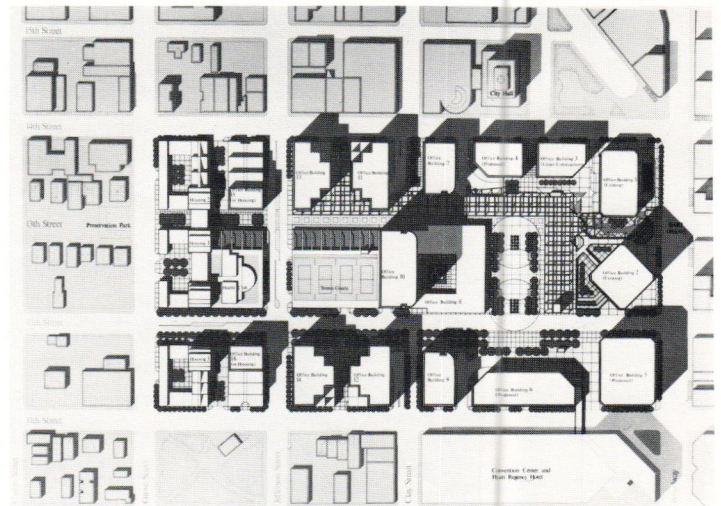
OBIII's rosy color scheme was too much for some city council members who may have forgotten that they approved the scheme in the first place. (See "How the Deal Goes Down.") As the facade was being raised, a flurry of comments hit the press criticizing OBIII for skimpy windows and a shiny pink skin, and unkindly comparing it to the low-cost public construction of the 1960s. The architects objected to that last canard. "The building is very well-designed for the money,"



1. Kaiser Center
2. Paramount Theater
3. City Hall
4. Preservation Park
5. Civic Center
6. Tribune Tower
7. Convention Center
8. 1100 Broadway
9. Trans Pacific Centre
10. Victorian Row
11. Chinatown
12. Oakland Museum
13. Jack London Square
14. Port of Oakland



Tribune Tower



Oakland City Center

Pilc says. "It's not a cheap building."

The developers, Grubb & Ellis Development Corporation and Bramalea Ltd., negotiated a wait-and-see truce with the city council, convincing critics to hold their fire until the facade was up and the building could speak for itself—and until the office space was rented. Now almost complete, OBIII has a contemporary glass curtain wall that IBM, at least, seems to like. They just leased nine of the building's 12 floors.

Smoothing Frayed Edges

A vivid blue construction fence decorated with mythic emblems surrounds the 12 block core of Oakland's city center redevelopment. Already the area's improved.

A decade ago, the city acquired the ramshackle neighborhood for \$20 million. Now the City Center Development Corporation intends to plow \$500 million into raising a new commercial core worthy of California's sixth largest city.

The Corporation is a joint venture between Grubb & Ellis and Bramalea Ltd., a Canadian firm which has an 80 percent interest in the partnership. An Oakland-based company, Grubb & Ellis is one of the largest diversified real estate and



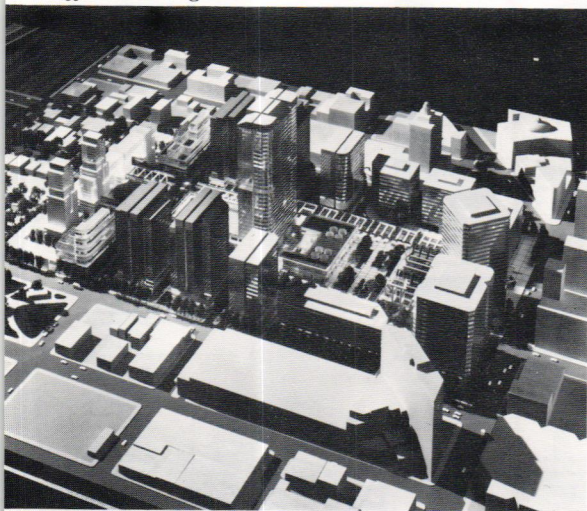
Office Building III



Wells Fargo Building



City Center Plaza



Preservation Park

Janice Fillip



*Tribune Tower, Clorox Building,
1100 Broadway, Hyatt Hotel and
Convention Center*

insurance firms in this country. Bramalea, with roots in residential real estate, now manages a \$1 billion portfolio of income-producing properties around the world.

Bramalea obviously has a huge influence on the architecture being built in Oakland. William A. Bodrug, Bramalea's Oakland representative, is aware of the area's architectural potential, and plans to involve different architects in each project. "I fight myself not to impose my own ideas," he says. "I've got a tremendous amount of control, but I think it would be terrible to have Bodrug's—or any individual's—imprint on Oakland."

The San Francisco firm of Robinson, Mills & Williams is designing a master plan for the city center. The plan, which replaces an earlier scheme to turn the area into a superblock shopping center, provides for 13 office buildings, 150,000 square feet of retail space, and 350 residential units. "The plan makes economic and design sense from the point of view of healing the damage that's been done to Oakland," says Jonathan Cohen, RMW's project designer.

"We worked hard to retain the sense of the city grid," says Matthew Mills, AIA. "The notion of holding buildings to the

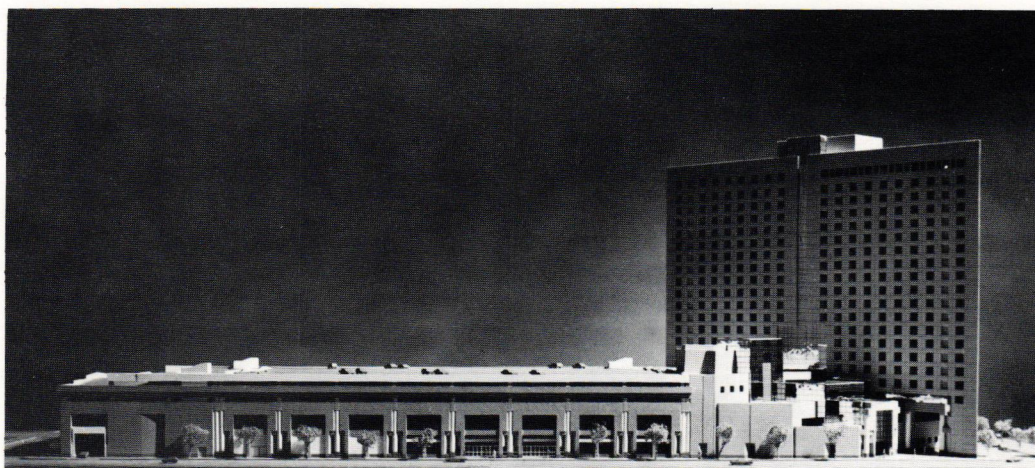
edges of the site and to the corners is important to further define the city grid. The area is an extension of the city, rather than an enclave." In keeping with Oakland's low-rise scale, RMW proposes a block-by-block incremental development of 10 to 30 story buildings.

The proposed master plan reopens streets the shopping center would have closed to traffic. Oakland's traffic is frustrating, and a major redevelopment issue is creating a circulation pattern which allows vehicles easy access to the city center.

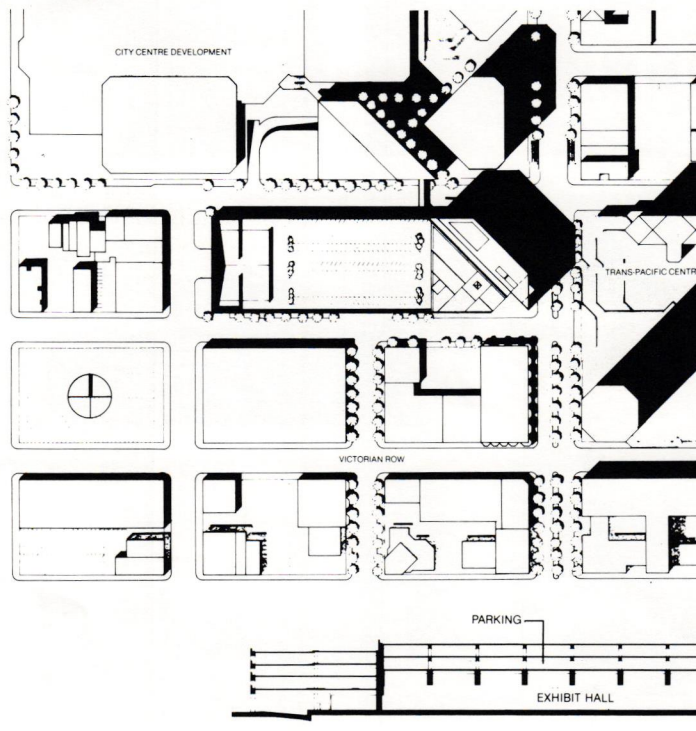
A growing number of people also enter Oakland through BART's City Center station, already a main commuter artery. Oakland's position at the hub of California's only light rail mass transit system for the first time gives city planners the option of phasing gas guzzlers out of the community core.

The City Center station opens onto an embryonic plaza. Fountains, a sculpture garden and a forest of flags designed by Sasaki Walker Associates of Sausalito hint at the sense of place to be created by the city center plaza and the 13th Street pedestrian mall.

The mall connects the city center to the housing element



Hyatt Hotel and Convention Center



Victorian Row

Janice Philip

planned by RMW in association with Daniel Solomon and Associates of San Francisco. The housing steps down to Preservation Park, an area of Victorian houses being restored into restaurants and professional office buildings. The pedes-

How the Deal Goes Down

The city of Oakland began priming the pump of private development about 10 years ago. Most of the \$35 million spent to acquire and clear land came from federal grants, according to Patrick Cashman, AIA, a redevelopment project manager for the City of Oakland Office of Economic Development and Employment (OEDE).

Through OEDE and the city council (acting as the redevelopment agency), the city controls redevelopment. It sets the price for all redevelopment land, approves all redevelopment plans and proposals, and pockets the revenues, all in the best interests of the people of Oakland.

Who defines those interests is, of course, at the heart of Oakland politics. The actual decision makers are an amorphous group of political, economic and social leaders who, for the

trian mall is modeled after Les Halles in 19th century Paris.

The shops, restaurants and theaters along the mall will help keep the city center populated past 5 p.m.

Right now, it's crazy to roam this area of Oakland at night.

most part, are staunchly pro-development. This reputation provokes some public comment that the city will approve any building, regardless of its environmental impact, if the deal is right.

The criticism that Oakland is too liberal in dealing with developers is not entirely fair. Land is sold on the basis of a developer's master plan and the developer's concession to provide public improvements. (For the city center alone, those improvements will total \$17 million.) Plans must comply with the Redevelopment Area Plan, which states specific requirements for land use, siting, elevations, public spaces and parking. Environmental Impact Reports are required. All proposals are submitted to the city council for debate, public hearing, and approval.

Architects hold key positions in the redevelopment hierarchy. George Williams, AIA is OEDE's director, and Patrick



Janice Filipp

Phase I, Trans Pacific Centre



Trans Pacific Centre



Janice Filipp

Central Business District



Chinatown

But an infusion of conventioners and corporate day-trippers should upgrade the present street life of hookers, winos and denizens of the doorway. It may be a while before *E.T.* replaces *Attack to Kill* on the Lux marquee, but one of the most op-

Cashman, AIA is the city's redevelopment project manager. Bert Bangsberg, OEDE's project management supervisor and Michael Kaplan, chief project planner for OEDE, also have backgrounds in architecture.

In the community, the Oakland Design Advocates (ODA), a group formed by the East Bay Chapter, the American Institute of Architects, actively influences development plans. Members of ODA volunteer their expertise in architecture and other design professions to help lay people in city agencies interpret and evaluate the plans submitted by developers and their architects. Especially sensitive to issues of urban scale, traffic circulation, public spaces and housing density, ODA has spent five years urging the city to hire a nationally recognized urban planning firm—with no vested interest in Oakland redevelopment—to prepare a comprehensive physical plan for downtown development.

timistic aspects of RMW's plan is the intent to open up the city center, rather than wall it off behind wrought iron fence and security cameras.

Whose Piece, Whose Pie?

The city center's newest investor was welcomed by a *Tribune* headline announcing, "Bechtel buying Oakland block at bargain price." After eight months of negotiation with the city, Bechtel Group Inc. agreed to pay \$2.83 million, less than half the estimated market value, for the block on Broadway between the Clorox Building and the convention center now under construction. Part of the purchase price—\$418,000—will be paid to Bramalea/Grubb & Ellis to reimburse them for monies spent over 10 years to develop the site.

"Redevelopment's about where the money is circulated, as much as how the building is designed," says Paul Cobb, director of the Oakland Citizens Committee for Urban Renewal. "The dispossessed get ignored because the focus is on beautiful buildings. The Black community wants to see the same deal that Bechtel got."

According to the 1980 census, Oakland's population is 65 percent minority—48 percent of that total is Black. Minorities want to share proportionately in the benefits redevelopment brings to Oakland. The semi-public Economic Development Corporation of Oakland is working with the city to devise alternative financing to enable minority firms to acquire land in redevelopment areas.

Meanwhile, Oakland's affirmative action program is making sure that minorities benefit from the jobs construction creates. Over 50 percent of the subcontractors on Phase I of the Trans Pacific Centre, for example, are minority-owned firms, according to Frank H. Anderson, operations manager for Turner Construction. On that project, Turner says, 21.38 percent of the dollar volume subcontracted was awarded to minority firms.

A Weekend in Oakland

The new convention center and hotel, nearly complete, will draw people to Oakland, where they'll find a diverse mix of cultures and lots of excuses to spend their money. Just a short walk from the hotel, visitors can lunch at Ratto's, bustle through Chinatown, buy voodoo charms at the corner drugstore, worship at the Full Gospel Mission, or browse through the art galleries and boutiques soon to replace the loansharks on Victorian Row. Conventioneers will spend an estimated \$10 million the first year the center is open. Whether visitors prefer the grand tier or the grandstand, Oakland's ready for them.

The complex designed by ELS Design Group of Berkeley is the first California hotel and convention center combined in one structure. An atrium lobby is one of the few things the 500 room hotel and the 118,000 square foot convention center have in common. Each building has its own client and separate contractors.

"Working with a combination of public and private client groups can sometimes be very difficult, but the excitement of the results makes it all worthwhile," says Barry Elbasani, AIA, ELS's principal in charge of the project. "We've now designed several buildings for joint public/private development teams. The decisions go beyond who pays for construction of the various parts, and bring into play questions of how the buildings operate over their lives."

The \$44 million hotel is developed by the Oakland City Center Hotel Company, a hometown consortium of investors led by Clorox Corporation, Kaiser Aluminum and the *Tribune*. Hyatt Hotel Corporation will manage the hotel.

The \$33.3 million convention center is publicly owned and operated. The project is financed through a combination of local revenues and federal grants. The Hotel Corporation was loaned \$5 million in federal monies. Repayment will be recycled to Oakland residents through a leveraged loan system which can generate up to \$15 million in commercial loans for small businesses, according to the Office of Economic Development and Employment.

The hotel is a 60 foot deep trapezoid, set at a 45 degree angle to Broadway. The

shared atrium lobby permits the 22 story hotel to be framed with 26 foot square bays. Windows punched out of these bays recall the facades of Oakland's older buildings.

Parking for 800 cars is placed above the convention center. "To integrate this mass into the design, we've gone back to Palladio's facades of the Basilica in Venice for inspiration," Elbasani says. "Hence, the pattern of exterior columns establishes a vocabulary whereby the garage is translated into the cornice of the entablature."

In the convention center, steel plate transfer girders provide 156 foot clear spans for the 320 foot long exhibit hall, and support columns for the garage. The exhibit hall holds 6,500 people, and can be divided into two smaller rooms. Extra meeting space is available on the second floor and in the hotel.

The hotel and convention center will link east and west, providing visitors easy access to the business district, as well as to Oakland's thriving Asian community.

The Asia Connection

Coordinating two owners may be a snap compared to changing owners in mid-project. Phase I of the Trans Pacific Centre began as part of a four block project proposed by Y.T. Chow from Singapore. The Dallas/Hong Kong firm of Wong & Tung International Inc., in association with Worley K. Wong & Ronald G. Brocchini Associates of San Francisco, were commissioned to do a master plan for a multi-use Asia Trade Center.

The original plan for Hong Kong, U.S.A. called for a 1.4 million square foot development of retail/commercial, office, hotel and condominium space, according to Richard Vanderburg, AIA, design architect for Wong & Tung. But the best laid plans of architects and developers can go awry. A year after fast track construction began, Carrian Investments, Ltd., a Hong Kong-based real estate firm, bought out Chow and changed the project's name to Trans Pacific Centre. That's not all they changed.

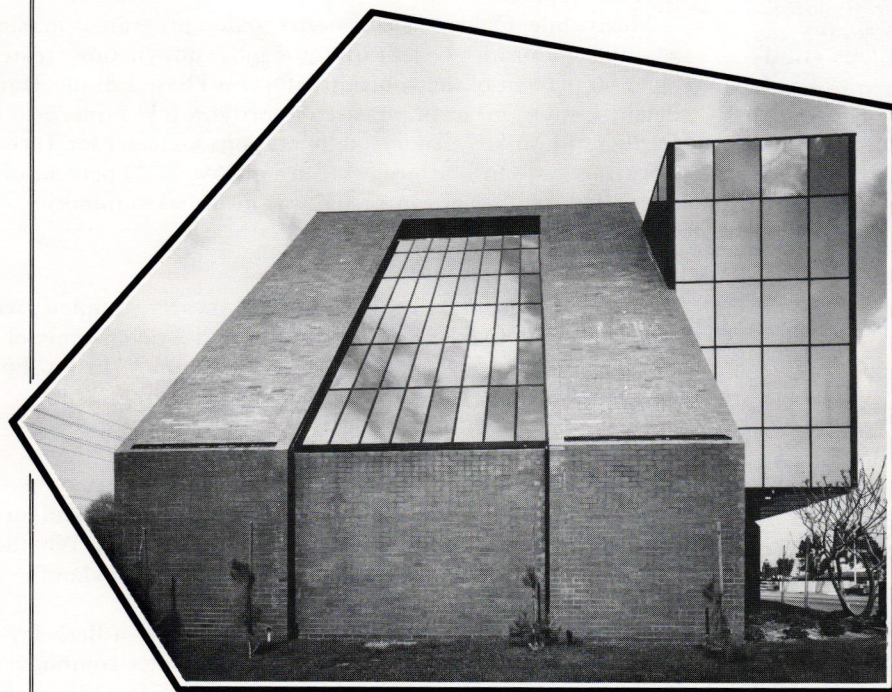
The architects were asked to convert the top floors from an Asian Center into offices while construction proceeded to complete the building's steel frame. Escalators were altered and more elevators added. Elevator shafts intended for the hotel were eliminated and space was added to each of the floors and the atriums. An Asian design theme no longer was necessary, so the facade was modified.

Carrian commissioned the San Francisco office of Skidmore, Owings & Merrill to do another master plan for the four block area. The original plan for a Phase II mirror image building was scrapped, and Phase I's termination line was redesigned as a simple mirror glass plane to reflect a proposed office tower.

Phase I's almost finished. So far, rental of office space is sluggish, according to the Grubb & Ellis rental agents, but retail leases are being taken by businesses such as Colonial Donuts and Site for Sore Eyes.

Plans for the rest of the \$240 million Trans Pacific Centre are in limbo. On the

Masonry is a dominant structural material!



Professional Office Building, Los Alamitos. Architect: The Elliott Group

It also complements
all other building products!

MASONRY INDUSTRY OF CALIFORNIA
Booth 201, CCAIA 1982 Convention

back burner are two 30 story residential towers, a parking structure for 2,000 cars, and an office tower billed as the tallest building west of the Mississippi. The landmark tower is intended to house statewide headquarters for Asian firms investing in the United States.

The project awaits a decision by the developers on where to place the office tower, according to John Mattock, general manager of Bovis International. Bovis is the project and construction management company representing Asian Holdings, Carrian's U.S. subsidiary for the project. The tower's present location, directly over a BART tunnel, will compound construction costs and "necessitate a small floor plate which may not be the most attractive solution," Mattock says. The residential towers probably won't be built, since little demand seems to exist in Chinatown for high- and moderate-income housing.

Originally planned at 68 stories, the Trans Pacific tower was stretched an additional 10 when construction began on a 76 story tower in Seattle. Some civic boosters think the tower will announce Oakland's arrival as an urban center. But others are concerned about the environments generated by towering structures.

An Environmental Impact Report predicts that the tower will act like a sundial, casting a mile-long shadow across the city. In some areas, the building's wind tunnel effect will raise winds above ambient levels. The tower also protrudes into air space claimed by the Alameda Naval Air Station and the Oakland airport.

The questions raised by the EIR cause some Oakland residents to wonder if the city is giving enough thought to the impact redevelopment will have. Just handling 35,000 new commuters is a staggering proposition. Can the city absorb the burdens that successful redevelopment will impose?

The city is taking a fresh look at Oakland's limits to growth, and updating the Oakland Central District Plan of 1966. Transportation studies are getting started, and other studies will follow. But the research will take at least 18 months to complete. Meanwhile the building goes on.

"The major necessary infrastructure is in place," says Patrick Cashman, AIA of the city's Office of Economic Development and Employment. "We can absorb the growth we see in the next 10 years. But in 10 years, we may be asking the same question San Francisco's now asking: Have we gone too far? It might be that kind of endgame."

Janice Fillip is editor of Architecture California.



Slip into something warm and comfortable this morning.

Warm your space with wood. It costs no more than steel.

Oak, Mahogany. Quality designer fabrics. Featured in a complete line of modular work stations, freestanding office partitions, computer furniture with the custom look and other office furniture.

Designed especially for your particular space and manufactured in San Jose by Universal Building Systems, Inc. Available on short lead time.

Call today for a free analysis of your space needs and information on how Universal Building Systems can save you tax dollars.



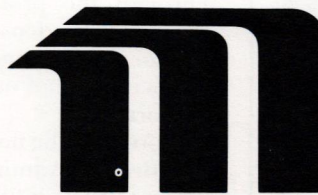
UNIVERSAL BUILDING SYSTEMS, INC.
345 Phelan Ave., San Jose, CA 95112
(408) 998-2477

Come see us

at the 1982 CCAIA Convention,
November 4-6, Hyatt Regency Hotel,
San Francisco.

On display will be samples from our full line of quality building materials, including our handsome new roofing product—Woodruf.

Booth 117



MASONITE CORPORATION

Western Hardboard Division
300 Ford Road
Ukiah, California 95482
(707) 462-2961

©

BRILLIG DATA SYSTEMS

MICROCOMPUTER BASED MANAGEMENT SYSTEMS

Project management,
word processing, accounting,
other business applications

Designed for professional
A/E offices by computer
professionals & architects.

(415) 552-2001
555 De Haro St.
San Francisco, 94107
or
(213) 479-6022
10960 Wilshire Blvd.
Los Angeles, 90024

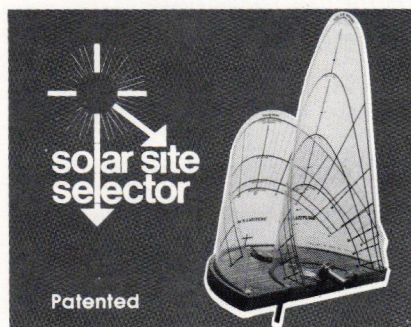
Architects Follow the Sun with Solar Site Selector

When you need guaranteed solar access data, you need it now, rain or shine. Solar Site Selector is the only direct measurement tool used by professionals who value SPEED, ACCURACY, AFFORDABILITY, EASE and ALL-WEATHER VERSATILITY.

Send \$89.50 plus \$4 shipping.
Calif. res. add 6% tax.

SPECIFY NEAREST EVEN LATITUDE.

VISA, MC, COD orders (or literature requests) call toll free 800-227-1617, Ext. 651. In Calif. dial 800-772-3545, Ext. 651.



lewis & associates

105 rockwood drive, dept. AC9
grass valley, california 95945
(916) 272-2077

FROM THE FLOOR

A Candidate's View

A Governor can change architecture by altering the way it's practiced. This year, the Governor vetoed an architect-sponsored bill to restore a majority of architects to the California State Board of Architectural Examiners, and approved legislation delaying the Residential Energy Standards.

With the November election rapidly approaching, gubernatorial candidates Tom Bradley and George Deukmejian were asked to comment on issues of vital interest to architects. Mr. Bradley was unable to respond due to a demanding travel schedule. Here's what Mr. Deukmejian has to say:

What is your position on professional member majorities on state licensing boards?

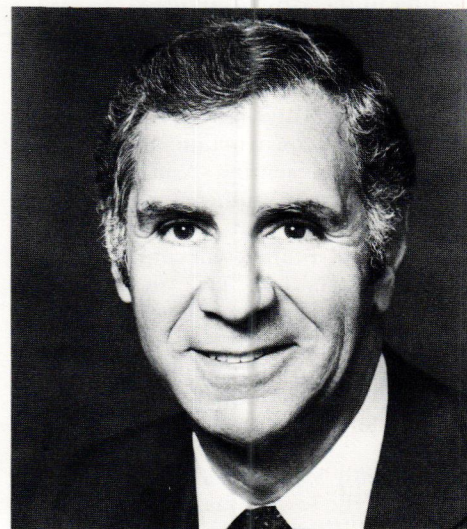
I believe that a majority of members on state licensing boards should be professionals who are technically qualified and experienced in the field licensed by each board. Moreover, as Governor, I will actively solicit the advice and recommendations of interested organizations, such as the California Council of the American Institute of Architects, in selecting men and women who meet my standards for service on California's agencies, boards, and commissions.

What legislative initiatives or administrative remedies would you support to ease the crisis in the construction industry and the lack of affordable housing in California?

Problems in the construction industry and the growing lack of affordable housing in California are largely products of federal monetary policies which have fostered high interest rates and effectively precluded many citizens from entering the housing market. However, state and local governments must share part of the blame.

It is estimated that governmental regulation is responsible for at least 20 percent of the price of a new home today. Through the proliferation of complex, costly and burdensome regulations, state and local governments have contributed to pricing homes out of the reach of most Californians.

Moreover, the no-growth philosophy of the Brown Administration must bear heavy responsibility for California's construction and housing crises. No-growth proponents have brought about overly restrictive zoning ordinances and even



George Deukmejian

moratoria on growth in some areas. Builders, construction workers, and individuals seeking affordable housing are, in essence, being punished by an administration whose highest goal is to lower expectations.

As Governor, I will replace the no-growth policies of the past seven years with a program of responsible, prudent, and balanced growth. I will work hard to rebuild the infrastructure of our state's economy, recreate a robust and confident business environment, and establish a climate for positive economic prosperity.

California's arbitrary and stringent regulatory system must be reformed. Multiple regulating and licensing procedures should give way to one-step approval processes implemented in a timely fashion to avoid unreasonable delays which merely increase costs and frustrate those who seek to purchase homes and those who build them.

I will appoint to housing related agencies men and women who desire to foster productivity, not crush it. I will seek legislation to add flexibility to laws requiring local jurisdictions to create and enforce general plans and will support legislation to expand the sources of mortgage capital. In addition, I favor initiative-creating tax incentives to encourage technological innovation and business development. These are just a few of the steps I will take to assist the construction industry and solve the housing crisis.

Do you support the California Energy Commission, its tax incentives pro-

grams and its ability to promulgate regulations?

One of the priorities of my administration will be to revitalize California's Energy Commission to assure that it does what it was intended to do and that it acts in the best interests of all Californians.

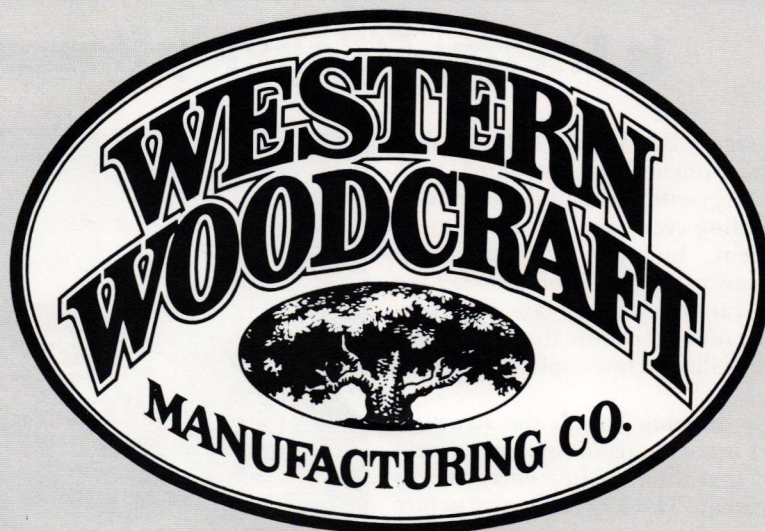
Unfortunately, under the guise of energy and environmental conservation, the Brown Administration—through action by the State Energy Commission and the Public Utilities Commission—has engaged in a deliberate effort to implement the Governor's no-growth philosophy.

For example, the Energy Commission has consistently thwarted the development of major new power plants; and the Public Utilities Commission's changes in rate structures, ostensibly intended to encourage conservation, have in fact penalized most users of energy and have created energy costs which are neither reasonable nor just.

While the Commission's tax incentive programs to foster energy conservation may be well-intended, the Energy Commission should not ignore the fact that major new power plants must be constructed in California to provide our citizens, businesses, and industries with reliable, reasonably priced energy in sufficient quantities to meet their needs. In this regard, I wholeheartedly support the development of a full range of alternative energy resources, including gas, coal, nuclear, hydroelectric, solar, and geothermal energy. Moreover, regulations adopted by the Commission must be reviewed to ensure that they are, in fact, necessary to achieve an important public purpose, and that they address public needs which outweigh the costs resulting from imposition of the regulations.

Do you support efforts to establish enterprise zones in California? How will these zones influence California's economic growth?

Yes. The enterprise zone concept is a promising approach to revitalize depressed areas in our state. By encouraging business expansion and new technology, improving neighborhood conditions and services, and, most importantly, creating new jobs and increasing employment opportunities for our existing work force, enterprise zones should have a positive influence on California's economic growth.



FINE ARCHITECTURAL WOODWORK

- Proud of our Installations,
- Proud of our Craftsmen.

415-285-5300

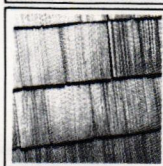
1237 Minnesota Street, San Francisco, CA 94107

ROOFS FOR ALL REASONS and SEASONS

only from  **LIFETILE™**

NEW

LITE-TILE & LITE-SHAKE PANELS



- Weigh only 60 lbs/sq
- Attractive, authentic tile and shake designs
- Large size panels go up fast over practically any surface
- Premium polymeric vinyl - PVC - won't rot or crack
- 25-year limited warranty
- Fire-safe, Class B and C rated

Plus the widest choice of styles and colors in America's finest high density, extruded concrete roofing tiles.



ESPAÑA™ Mission Tile
Colonial SLATE
SHAKETILE
Elegant CHATEAU™
Super SHAKETILE™ (shown)

**FIRE-SAFE • MAINTENANCE FREE
VIRTUALLY INDESTRUCTIBLE
AFFORDABLE • ENERGY EFFICIENT**

Now for re-roofing, too. Ask for **FREE** structural inspection.

CALIFORNIA TILE, inc.

5111 Riverside Ave.
Rialto, CA 92376
714/822-4407

45111 Industrial Dr.
Fremont, CA 94538
415/657-0414

LIFETILE Corporation

P.O. Box 21516
San Antonio, TX 78221
512/626-2771

P.O. Box 1793
Lake Oswego, OR 97034
503/636-8419

fire-safe
Beautiful roofs for the good life

Is Energy-Efficiency Hazardous to Your Health?

The Gregory Bateson state office building in Sacramento was designed as a model energy-efficient public structure. The building was hailed as a great achievement, but the accolades soon turned to accusations. Problems beset the building, ranging from delays in equipment operation to claims that the building was a "killer." How could so much go wrong?

On the drawing board, the structure promised innovations in applied energy-efficiency that would reduce energy needs by 60 percent. The \$20 million structure was designed to use solar collectors, a night venting system, a rockbed "coolth" storage mass, and a network of louvers, trellises and awnings—all computer orchestrated—to heat and cool the building. It sounded good on paper, but in practice little went according to plan.

The problems began when tenants moved in prematurely in May 1981. Factory defects in ventilation equipment reduced air circulation and raised the levels of toxic chemicals from floor sealants and the glue still being used to lay the carpet.



Cathy Kelly

To make matters worse, no one took responsibility for user education. Tenants hampered air circulation by raising full-height partitions and disrupted the indirect lighting by moving their desks. Maintenance people failed to flush air

adequately through the building and often used toxic cleaning compounds.

The result was an outbreak of employee health complaints—headaches, dizziness, nausea, respiratory problems, hair loss and rashes. The California State Em-



*Roofs of
Distinction*

Berridge Manufacturing Co.

Save installation time and cost while providing a lasting architectural finish. Available in twelve colors and over ten different styles.

Prefinished metal roofing systems

Standing seams
Batten seams
Mansard frames
Equipment screens
Bermuda shakes
Rustic shakes
Victorian shakes
Spanish tile
Soffit
Facades

Available through: **DELTA THERM INC.**/1625 Remuda Lane, San Jose, CA 95112/(408) 280-7278/Outside California call toll free 1-800-231-8127

by Teri Robinson

employees Association claims that as many as 150 out of 1,224 employees were ill on any one day. Fear of the building's toxic effects rose to the point that the coincidental, off-site deaths of two employees were rumored to be caused by the building.

In response to the complaints, the California Occupational Safety and Health Administration (Cal-OSHA) conducted tests which revealed inadequate air circulation and "slightly elevated amounts of formaldehyde, carbon dioxide and poly-nuclear aromatic hydrocarbons in certain areas," although no levels were above acceptable health standards.

These difficulties caught the attention of the news media. Newspapers quickly played up every problem, but they failed to provide a balanced view, according to project architect Glenn Hezmalhalch, AIA. State Architect Barry Wasserman, FAIA says that the building received some good coverage, but "much of it was very sensationalist, to put it mildly."

Media coverage has died down recently, perhaps because there are no more problems to report, only solutions—which aren't as politically interesting. The defective equipment was fixed, and tenants were taught how to use their building. An April 1982 Cal-OSHA study found only slightly elevated hydrocarbon residues, and even these are down to normal levels now that more mechanical problems have been corrected, Hezmalhalch says.

Lessons learned from the Bateson Building are being applied to the five other energy-efficient public buildings planned for Sacramento. Two of those buildings, completed this summer, will remain unoccupied until the energy systems and indoor environment are thoroughly tested. Hezmalhalch says, "We don't want to make the same mistake twice."

Yet worries remain. The Bateson Building has damaged the image of energy-efficient buildings. Some fear that these problems may be the first hint of a toxic contamination epidemic in energy-efficient, "tightly sealed" buildings. But Hezmalhalch predicts that the successful completion of the other buildings will "take the pressure off and improve the image."

Teri Robinson, M.A. is an intern at Architecture California through a program at the University of California, Davis.

C L A S S I F I E D

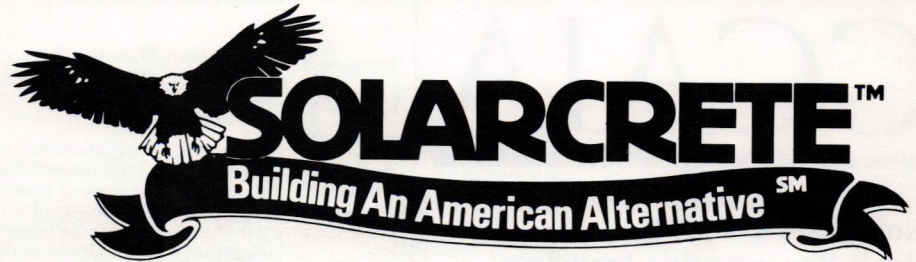
POSITION AVAILABLE SENIOR DESIGNER

Bobrow/Thomas and Associates is a 110-person architecture and planning firm in the Westwood area of Los Angeles specializing in major institutional design. The firm is seeking talented professionals who will be responsible for developing conceptual and schematic facilities design as lead members of project teams. Qualified candidates will have a degree in Architecture and 10 years experience in institutional design, preferably in health care related design, a team management approach to the design process, an appreciation of client relations, and willingness to explore new solutions in institutional design.

Interested candidates are invited to submit a resume and examples of their work to: Michael Bobrow, Bobrow/Thomas & Associates, 1001 Westwood Boulevard, Los Angeles, California 90024.

Travel

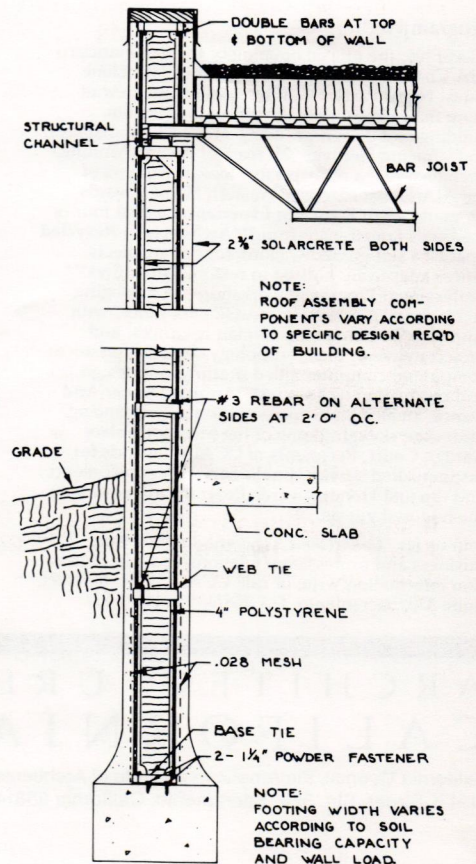
STUDY TOUR OF JAPAN in spring. 34th Architecture and Gardens Tour leaves west coast April 6, 1983. In depth, 22 days for professionals and laymen. Limited to 23 persons. Escort and lectures by Kenneth Masao Nishimoto, AIA. Brochure from Travel Center Pasadena, 754 E. Colorado Blvd., Pasadena, CA 91101. Phone: (213) 681-5281.



The Solarcrete System features the following advantages:

- Highly energy efficient (offering R-Values of 19-37).
- Low maintenance requirement (reinforced concrete construction).
- Cost competitive with conventionally built structures.
- Unlimited design versatility (inherent with the patented building technique).
- Low insurance requirements (Two (2) hour fire rating and a seismic three (3) rating).
- Applicable in all building markets (residential, commercial, industrial, agricultural, rehabilitation).
- Optional BTU management system (solar assisted with no auxiliary units required).
- Major building code approvals.
- Reduced Noise Pollution through inherent soundproofing.
- Resistance to termites, vermin, moisture, mold and rot.

The Solarcrete Building System is extremely flexible and without the use of costly conventional form work offers an on-site building technique or a pre-cast, pre-assembled technique depending on the project requirement. The resultant insulated, reinforced concrete composite section can be used for many engineered applications.



Write for Free Brochure

RHS Construction, Inc.

10398 Rockingham Dr., Unit #12, Sacramento, CA 95827 • Phone (916) 362-4108

CONNECTIONS

Poised on the threshold of discoveries that will change architecture, its practice and our lives, CCAIA steps beyond traditional boundaries to make "Connections" with science, technology and the arts, the theme of its 37th Annual Convention. Architecture undoubtedly will be influenced by the current trends and pending developments in these fields.

CCAIA is pleased to present innovative, dynamic speakers who will explore new connections:

CCAIA

**37th Annual Convention,
November 4-7, 1982
Hyatt Regency, San Francisco**

Program Highlights

AIASF100: the official opening of the San Francisco AIA Chapter's major museum show*****Welcome Guest Night Party/Exhibits:** a festive preview of more than 150 exhibits, featuring the latest in building and design products; architectural displays; and "Tracing Heritage: 25 Years of Award Winning Architecture," a retrospective look at winners of the AIA/Sunset Magazine Western Home Awards Program*****San Francisco Experience:** a boat tour of the City's famed waterfront*****Architects In Recycled Spaces:** a self-guided walking tour of architects' offices adaptively housed in restored structures*****Professional Programs:** workshops on managing architectural practices in recessionary times, with emphasis on marketing, human resources, and project delivery; plus technology seminars on micro computers, computer aided drafting and design, and production techniques*****Awards Dinner And Dance:** an elegant evening of dining and dancing under the skylight dome of the Sheraton Palace Garden Court. Recipients of CCAIA's awards for distinguished service, public service, and excellence, and the first Honor Awards Program will be among the honored guests.

Join us for "Connections," the link to improving business and professional relationships. For registration information write or call: CCAIA, 1414 K Street, Suite 320, Sacramento, CA 95814, 916/448-9082.



Alan Cranston
U.S. Senator, California

Senator Cranston's background in the building industry stems from his personal involvement as head of The Cranston Company, a Palo Alto real estate firm and as president of Homes for a Better America, a Los Angeles building company. The Senator serves on numerous committees, including Banking, and Housing and Urban Affairs.



Dr. Marian Diamond
Professor of Anatomy-Physiology
"The Brain: Environment,
Left-Right, Male-Female"

Dr. Diamond, internationally known brain researcher, has identified sex differences in the cerebral hemispheres, the most highly evolved parts of the brain. She will provide insights on how alterations in the environment actually change brain structure.



Dr. James Marston Fitch
Director, Graduate Program in
Historic Preservation, University of
Pennsylvania and Director, Department
of Historic Preservation, Beyer
Blinder Belle, Architects & Planners
"Physics and Metaphysics in
Current Architectural Philosophy"

Dr. Fitch is a leader in the American preservation movement and has played a leading role in the theoretical development of architectural climatology and human-environment relationships.



Richard J. Haas
Muralist
"Architectural Illusion and
Its Use Through History"

Richard Haas, artist and instructor, is widely recognized for his three-dimensional murals which enhance numerous buildings throughout the United States and abroad. Completed wall projects include the Boston Architectural Center, Newbury Street, Boston.



Professor Spiro Kostof
Architectural Historian
"The Esthetics of Demolition"

Professor Kostof will take a look at the issue of urban demolition — the practice and motivation of destroying build stock — from Classical antiquity to the present. He has authored four books, most recently *The Architect, Chapters in the History of the Profession*.



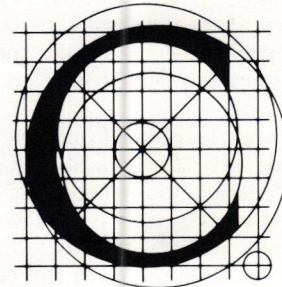
Dr. John N. Ott
Director, Environmental Health and
Light Institute
"The Effects of Artificial Light on
Human Health and Behavior"

Dr. Ott, a pioneer in studying the effects of light and radiation on the behavioral problems of school children, will discuss breakthroughs on daily health hazards and what to do about them.



Dr. Glenn T. Seaborg
Professor of Chemistry and
Associate Director
Lawrence Berkeley Laboratory
"The New Elements"

Dr. Seaborg, Nobel Prize winner for Chemistry, discusses his work on the chemistry of transuranium elements. Nuclear scientists have synthesized and identified 15 new elements beyond uranium and predictions indicate it should be possible to extend the list even further into a region that can be described as "superheavy elements."



ARCHITECTURE CALIFORNIA

California Council, the American Institute of Architects
1414 K Street, Ste. 320, Sacramento, California 95814

Bulk Rate
U.S. Postage
Permit No. 2538
PAID
Sacramento, CA

50406 SANTA MONICA CA 90405
2919 1/2 MAIN ST
MAYER/TAYLOR ARCHITECTS
AIA ROBERT H TAYLOR
C06803

\$18/6 ISSUES

Architecture California pinpoints the problems, solutions and leading ideas in California architecture. Now available to non-CCAIA members by subscription.



ARCHITECTURE CALIFORNIA

JULY • AUGUST, 1982

CCAIA • VOL. 4, NO. 4



Workers' Compensation Insurance~ Some firms save, some don't!

DESIGN PROFESSIONALS SAFETY ASSOCIATION, INC. <small>18872 MACARTHUR BLVD., NO. 400 IRVINE, CALIF. 92715</small>		863 <small>90-2881 1222</small>
PAY TO THE ORDER OF		August 12 19 81
272 DPSA POLICYHOLDERS		\$ 109,395.00
The sum of 109,395 dollars 00 cts		DOLLARS
 HOME BANK		
1979-1980 Dividend Distribution		NON-NEGOTIABLE
⑆ 122228812⑆ 0964 84 9⑈		

DPSA

THESE LETTERS CAN MEAN A SAVINGS IN THE COST OF YOUR WORKERS' COMPENSATION INSURANCE. They stand for Design Professionals Safety Association, a non-profit corporation organized exclusively for architects and engineers to assist in reducing on-the-job accidents and offering a special Group Workers' Compensation Dividend Plan.

WORKERS' COMPENSATION INSURANCE

The law requires all employers to carry Workers' Compensation Insurance. THE STATE SETS WORKERS' COMPENSATION INSURANCE RATES. MOST POLICIES FOR SMALL EMPLOYERS DO NOT PAY DIVIDENDS. DPSA OFFERS A DIVIDEND PLAN.

DIVIDENDS

SOME 272 ARCHITECTURAL AND ENGINEERING FIRMS participating in the DPSA program HAVE RECEIVED THEIR SHARE OF THE LATEST DIVIDEND DISTRIBUTION OF \$109,395. Over the last five years, DPSA has averaged an annual dividend return of 32.9% with the last year producing a whopping 49.5% earned dividend.

FOR INFORMATION

If you are not receiving a dividend on your Workers' Compensation policy or if the dividend you are receiving does not compare with what DPSA has to offer, please CONTACT DPSA'S BROKER, ASSOCIATION ADMINISTRATORS & CONSULTANTS INC. In California call 714/833-0673 collect, other states call 800/854-0491. Ask for Carol Krotine or Sherall Gradias to learn if your firm is eligible.

DPSA ENDORSEMENT

The DPSA plan is endorsed by:
 California Council, AIA Insurance Trustees
 Arizona Society, AIA
 Minnesota Society, AIA • Louisiana Architects Association
 Wisconsin Society, AIA



Association Administrators & Consultants, Inc.
 19000 MacArthur Blvd., Irvine, CA 92715

CCAIA

California Council, the American
Institute of Architects
1414 K Street, Suite 320
Sacramento, California 95814
(916) 448-9082

Executive Vice President
Paul W. Welch, Jr.
Director, Governmental Relations
Pamela Boyd Williams
Director, Membership Services
Betty Travis

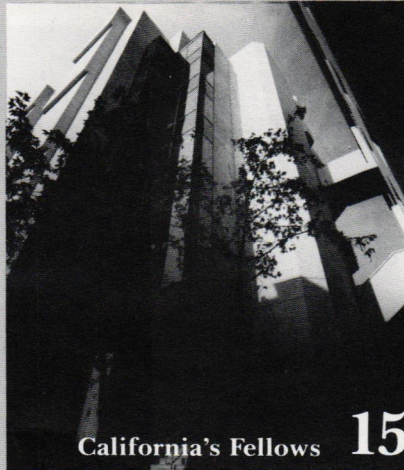
BOARD OF DIRECTORS

President
William E. Patnaude, AIA
Vice President/President-Designate
Paul R. Neel, AIA
Secretary
Harry Jacobs, AIA
Treasurer
Virgil Carter, AIA
Vice President/Governmental Relations
Robert E. Allen, AIA
Vice President/Professional Development
Lawrence P. Segrue, AIA
Vice President/Public Awareness
Richard G. Conklin, AIA

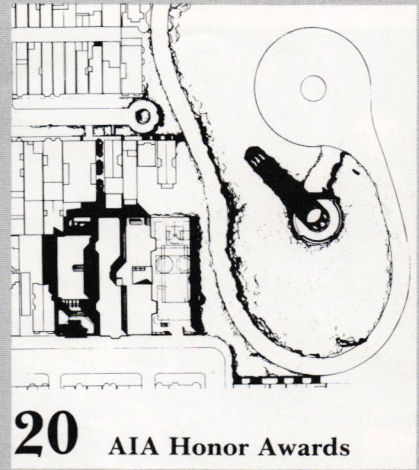
AIA Directors

George Bissell, FAIA
William Blurock, FAIA
Harry C. Hallenbeck, AIA
Jon Peter Winkelstein, FAIA
Associate Directors
Mary Katharine Randrup (North)
Brian Sehnert (South)
Student Director
Andy Dorr
Cabrillo Chapter
Willis R. Hanes, AIA
California Central Coast Chapter
Andrew G. Merriam, AIA
Central Valley Chapter
Ray Takata, AIA
Richard Lewis, AIA
East Bay Chapter
Donn Logan, FAIA
Harry Haimovitch, AIA
Rosemary Muller, AIA
Golden Empire Chapter
David Doll, AIA
Inland California Chapter
Richard C. Holden, AIA
Los Angeles Chapter
Cyril Chern, AIA
Martin Gelber, AIA
William Landworth, AIA
Fred P. Lyman, AIA
Kenneth Newman, AIA
Alan Rosen, AIA
Joseph Vaccaro, AIA
Bernard Zimmerman, FAIA
Monterey Bay Chapter
Fred Christensen, AIA
Orange County Chapter
Sotiros (Sam) Grillias, AIA
William C. McCulloch, AIA
Thomas B. Moon, AIA
Pasadena and Foothill Chapter
Anton Johs, AIA
Inge Rose, AIA
Redwood Empire Chapter
Edward M. Sohl, Jr., AIA
San Diego Chapter
Ralph H. Bradshaw, AIA
Richard Paul Buss, AIA
Douglas H. Austin, AIA
San Francisco Chapter
Richard Broder, AIA
Audrey Emmons, AIA
Robert H. Hersey, AIA
Peter Hockaday, AIA
Kenneth Natkin, AIA
Christopher Raker, AIA
Donald Wudtke, AIA
San Joaquin Chapter
Warren D. Thompson, AIA
Santa Barbara Chapter
Irwin Sorkin, AIA
Santa Clara Valley Chapter
Marvin A. Bamburg, AIA
Robert W. Hawley, AIA
Ronald Ronconi, AIA
Sierra Valley Chapter
Ernie Yoshino, AIA
Ventura County Chapter
Eugene Fickes, AIA

C O N T E N T S



California's Fellows 15

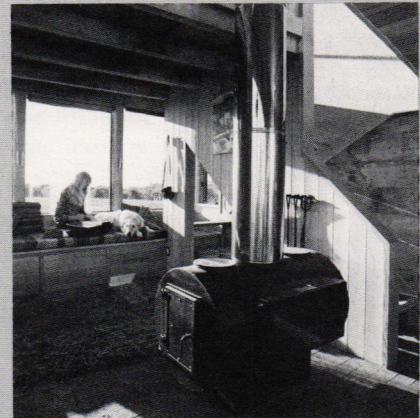


20 AIA Honor Awards

Architectural Review in Santa Barbara: Evolution and Heritage, by William Howard Wittausch, AIA 24



26 Interview: David Wright, AIA



D E P A R T M E N T S

NEWS

4 COMMENTARY: 14

COUNCIL

7 Winners and Losers—the

FINANCE:

8 Politics of Energy Policy,

SAFE-BIDCO, Fund for
Energy, by Mark Braly

by Charles Eley, AIA

POINTS OF VIEW:

10 FROM THE FLOOR: 30

Residential Energy Standards,
by Lee J. Goldin
and Arturo Gándara

Toward a New Generation of
Energy Efficient Buildings, by
Wm. Stevens Taber, Jr., AIA

Covers: Front—Stairwell, Macondray Terrace, San Francisco. Architect:
Hood Miller Associates. Photographer: Richard Sexton, Matrix.
Back—Sundown House, Sea Ranch. Architect: David Wright, AIA.
Photographer: Darrow M. Watt.

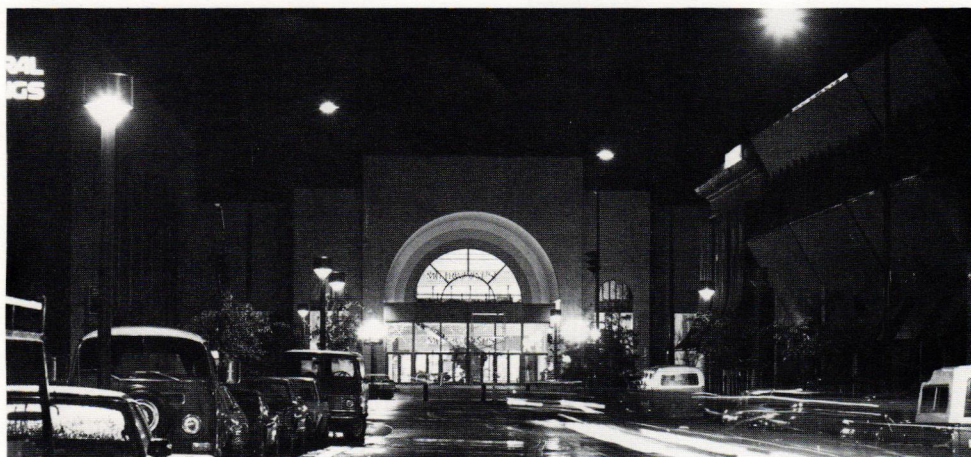
Editor
Janice Fillip
Art Director
Tom Glass,
Roosevelt Studios

Editorial Assistants
Cindy Trantham
Rebecca Houser
Editorial Board
Joseph Woollett, AIA, chair

Ralph Bradshaw, AIA
Richard Conrad, AIA
Donalee Deffenbach
Harry Jacobs, AIA
Fred Lyman, AIA

Advertising Director
Duke Lynch
541 St. Andrews Dr.
Aptos, CA 95003
(408) 662-0436

Architecture California, an official publication of the California Council, the American Institute of Architects, is published six times a year. Subscriptions: complimentary to CCAIA members; \$18 a year for all others. For subscriptions, write Circulation Department, 1414 K Street, Suite 320, Sacramento, CA 95814. CCAIA is not responsible for statements or opinions expressed in *Architecture California*, nor do such statements necessarily express the view of CCAIA or its committees. © 1982 by CCAIA.



Santa Rosa Plaza, a regional shopping center, is designed to physically and functionally integrate into Santa Rosa's downtown redevelopment, and to play a key role in reestablishing the central city as a major commercial center. The Plaza's 30-acre site links historic Court House Square and Railroad Square, located on opposite sides of the Plaza, by means of a pedestrian passage through the mall and concourse under the five parking garages. The project has an overall construction value in excess of \$37 million. The major elements in the Santa Rosa Plaza are a central two-story mall of almost 442,000 square feet, capable of holding almost 130 shops, banks, and restaurants; three major department stores; five three-story parking structures with space for 3,100 vehicles; and a vehicular underpass connecting the main freeway access road with the downtown streets. The shopping mall and garages were planned and designed by Bolles Associates of San Francisco for developer Ernest W. Hahn, Inc.



Thomas K. Butt, AIA was awarded the Meritorious Public Service Award by the U.S. Coast Guard for his leadership in the restoration of the East Brother Light Station at Point Richmond. Mr. Butt founded East Brother Light Station, Inc., the nonprofit corporation that raised funds and coordinated the massive volunteer effort that created a public recreation area on the island where the historic 1874 lighthouse is located. The lighthouse is open to the public and operates as a bed-and-breakfast inn. The restoration serves as a pilot project for adaptive use of threatened lighthouses dotting the nation's coast. The East Brother Light Station just received the 1982 Honor Award from the National Trust for Historic Preservation.

New Design to Collect Winter's Sun

A new design in solar collector cover tubes and absorber may triple heat collection during a typical northern U.S. winter, according to a recent report in *Science News*.

Carlyle Herrick, an engineer at the General Electric Research and Development Center in Schenectady, New York, has modified the traditional flat-plate solar collector, designing optically active elements that are cylindrical in shape. The collector's cover is made of vacuum tubes, similar to those sheathing a fluorescent light, fastened together into panels.

When incident light is normal, tests show that the tubular design increases light collection by 15 percent or more. And as the light's angle of incidence becomes more acute, the tubes become even more effective. The tubular design can almost double the daily light available to the absorber, according to Herrick.

A cavity filled with a mat of black fiberglass sits beneath the tubular cover. Heat collected by the tubes is transferred into warm air circulating through the cavity. A thermally stable, insulating foam backing in the cavity minimizes weight and conductive heat loss. Even during freezing winter weather, when cloud conditions block out three-quarters of the normal solar radiation, the new cylindrical system "delivers heat like gangbusters," Herrick says.

Awards Programs

The first Honor Awards Program will be held by the California Council, the American Institute of Architects, to honor and publicize excellent design in California and to publicize examples of architectural excellence. Any corporate member of the CCAIA may submit projects located anywhere in the United States or abroad. Corporate members of the AIA licensed in other states may submit only projects located in California. Registration information, submission format requirements, and other guidelines are available from CCAIA, 1414 K Street, Suite 320, Sacramento, CA 95814. Phone: (916) 448-9082. Deadline for requesting entry forms: July 23, 1982.

The 1982 CCAIA Commendation Awards Committee now is accepting nominations for the following awards: Excellence in Education, Excellence in Media, Excellence in Allied Arts, Excellence in Technology, and Distinguished

A Quest in Time

"A Quest in Time" was an appropriate theme for The American Institute of Architects 125th Anniversary Convention held in Honolulu, Hawaii in June. It was the first AIA Convention ever held beyond the shores of the continental United States.

About 3,000 members and guests attended three major theme presentations that challenged the profession to look beyond the present and begin planning for the future. B. Gentry Lee, Chief Engineer of NASA's Jupiter Project and Series Manager of the PBS "Cosmos" program, told a captivated audience how space technology and the climatic conditions of the planets impact present and future generations, and speculated on the feasibility of design and construction projects in space. Joseph MacInnis, M.D., leader of the SUBLIMNOS and SUB-IGLOO Projects and series host of CBS-TV's program "The New Wave," discussed how oceanography will influence the near future of the earth, the environment, and architecture. The last theme presentation, delivered by Dr. Gerard O'Neill, Professor of Physics at Princeton University and author of *2081, The High Frontier*, concerned emerging technologies and their impact on the future environments.

Delegates to the business sessions adopted three resolutions, including one written by the CCAIA which urges the United States government to assume a leadership role in achieving total nuclear disarmament and to direct its strongest diplomatic efforts toward attaining world peace through cooperation, brotherhood, and mutual respect.

Delegates adopted a resolution submitted by the Los Angeles Chapter, AIA and cosponsored by the CCAIA to establish an Associate Member Task Force to identify, review and represent Associate goals and programs. Also adopted was another CCAIA resolution requiring the National AIA to assign a representative from an appropriate commission to review the issues of concern to the National Council of Architectural Registration Boards (NCARB) and its member state boards, and to recommend appropriate courses of action to the AIA Board of Directors.

The CCAIA withdrew three resolutions from consideration. A resolution asking National AIA to revise its budget

format was withdrawn after the AIA Board of Directors decided to implement a budget format substantially similar to that used by the CCAIA. Two other resolutions concerning Directions 80 were withdrawn after delegates adopted the Directions 80 Report. A resolution submitted by the East Bay Chapter, AIA concerning environmental quality, affordable housing, and community development was withdrawn after the AIA Board of Directors reaffirmed its policies in these areas. A CCAIA resolution asking for a study on a graduated or categorized dues structure was defeated.

The only non-California resolution to reach the floor of the Convention was submitted by the Portland Chapter, AIA. The delegates adopted this resolution which expresses the AIA's support for prompt enactment of a National Scenic Area designation for the Columbia River Gorge.

In a major action, delegates adopted the report and recommendations of the Directions 80 Task Force. The Task Force, established as a result of a CCAIA resolution in 1980, was created in a national

dialogue with the membership to define the future goals of the AIA, and the appropriate roles of national, regional, state and local components. The report recommends numerous changes in the responsibilities of AIA components, including broadening the membership of the AIA by establishing a public membership category of the AIA Foundation, and transferring the primary source of direct membership services from the national to the local components. The AIA Board of Directors now must develop a process to implement the report.

Regarding the election of officers, George M. Notter, Jr., FAIA of Boston was elected to the office of First Vice President/President-Elect. Leroy E. Bean, FAIA of Sioux Falls, John A. Busby, Jr., FAIA of Atlanta, and R. Bruce Patty, FAIA of Kansas City were elected as Vice Presidents. Harry Harmon, FAIA, a member of the Los Angeles Chapter, AIA, was elected Secretary.

Paul W. Welch, Jr.

CONNECTIONS

"...all that is and has been is merely the twilight of the dawn..."

H.G. Wells

CCAIA steps beyond traditional boundaries to make **Connections** with science, technology and the arts the theme of its 37th Annual Convention, to be held November 4-7, 1982. The Convention will be held in San Francisco to celebrate the 100th birthday of the San Francisco Chapter, AIA—the oldest established chapter west of Chicago. The program includes:

- "The Aesthetics of Demolition"
Spiro Kostof, architectural historian
- "The New Elements"
Dr. Glenn T. Seaborg, chemist
- "The Brain: Environment, Left-Right, Male-Female"
Dr. Marion Diamond, brain researcher
- "The Effects of Artificial Light on Human Health and Behavior"
John N. Ott, Doctor of Science
- "The State of Architecture"
James M. Fitch, architectural historian
- "Architectural Illusion and Its Use Through History"
Richard J. Haas, muralist
- "Architects in Recycled Spaces," a self-guided walking tour
- "The City as a Living Laboratory," a waterfront boat tour
- Professional development workshops
- Exhibits of over 150 products and services

Register now

California Council, the American Institute of Architects
1414 K Street, Ste. 320, Sacramento, CA 95814 (916) 448-9082

SAFE-BIDCO, Fund for Energy

Architects who open new frontiers of energy-sensitive design and planning often find one ultimate barrier to their innovations: financing. Now there's a new corporation, backed by the State of California, which may help.

SAFE-BIDCO, Fund for Energy, set up shop late last year as a "business and industrial development corporation"—BIDCO. BIDCOs are chartered and supervised by the State Banking Department as lenders who specialize in small business financing.

SAFE-BIDCO has taken this a step further, specializing in small *energy* businesses. SAFE-BIDCO was set up by legislation authored by Senate President

Pro Tempore David Roberti. Its charter is to provide loans to small but credit-worthy businesses when banks will not. (SAFE stands for State Assistance Fund for Energy.)

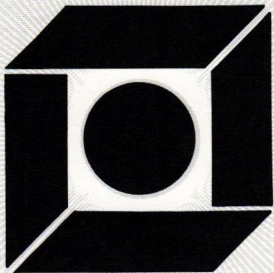
The first loan applications to go through SAFE-BIDCO indicate that architects could be an important target group for the corporation. Among these loans are two which will finance purchase of and leasehold improvements for the offices of

architects who are leading exponents of passive solar energy design. One project, if funded, will create an example of energy-efficient remodeling of old commercial space.

The corporation is chartered to make loans to small businesses which are providing alternative energy sources, defined as energy conservation, active or passive solar heating and cooling, solar electric, co-generation, wind or geothermal energy conversion, small hydroelectric, and energy from waste, crops or other biomass, among others.

When is an architect in the energy business? Probably when 75 percent of the architect's practice is dedicated to passive solar energy design.

The corporation also will consider loans to small businesses in any field,



BLOMBERG WINDOW SYSTEMS
 1453 BLAIR AVE · SACRAMENTO · CA · 95822
 (916) 428-8060

MANUFACTURING THE FINEST QUALITY WINDOWS AND DOORS

- DURABLE EXTRUDED ALUMINUM FRAME CONSTRUCTION
- ENGINEERED FOR ENERGY EFFICIENCY
- PRIMARY AND SECONDARY LOCKING SYSTEMS
- UNIQUE THERMOSETTING ACRYLIC COLOR FINISHES
- FULLY WEATHERSTRIPPED
- ADJUSTABLE DEPTH THRU-THE-WALL FRAMES
- SPECIAL RETRO-FIT FRAMES FOR REMODELING

GREENHOUSE WINDOWS, SOLARIUMS, SKYLIGHTS, SLIDING GLASS DOORS,
 SLIDING WINDOWS, CASEMENT & PROJECTED WINDOWS,
 ROUND, ARCHED, & PICTURE WINDOWS, ENTRANCE DOORS & STOREFRONTS

KNOWN FOR CREATIVE DESIGN, QUALITY, AND SERVICE

AS FEATURED ON MACONDRAY TERRACE
 SAN FRANCISCO

by Mark Braly

if the purpose of the loan is to reduce conventional energy use. Thus, SAFE-BIDCO might finance the construction of a new commercial building which is super energy-saving and innovative in design, or provide capital for leasehold improvements which achieve the same result. The building should be a project of the small business itself, not of real estate developers.

SAFE-BIDCO seeks Small Business Administration guarantees for the great majority of its loans and is, therefore, bound by SBA regulations and policies.

With SBA guarantees, SAFE-BIDCO will be able to bring in private dollars to supplement its state loan fund in a ratio of nine private dollars to each public dollar. This is done by selling the guaranteed portion of the loans to private investors.

The corporation does not make subsidized loans. Its interest rates are similar to what applicants would get from banks—as much as 2 percentage points floating above prime. Many banks, if they make the loan at all, may charge more.

The advantage of the SAFE-BIDCO is that it will provide longer-term loans than most banks currently will give their small business customers. The terms are up to seven years on working capital, up to ten years on equipment, and up to 25 years for commercial real estate purchase.

Current loan limits are \$550,000. Typical applications are for less than \$200,000.

The corporation is, however, launching a special small loan program for small

businesses that want to invest in various energy conservation improvements to reduce their utility bills. Loans in this program will be as low as \$2,500 and are for shorter terms—up to 18 months. The program is being run in conjunction with a Pacific Gas & Electric program that encourages businesses to convert to more efficient lighting systems by reimbursing up to 50 percent of the cost. SAFE-BIDCO finances upfront costs for this special project only. The program will be expanded to cover other types of conservation improvements as utilities expand their rebate programs.

Mark Braly is president of SAFE-BIDCO. Operating throughout the state, SAFE-BIDCO is located at 2021 N Street, Suite C, Sacramento, CA 95814. Phone: (916) 442-3321.

BRILLIG DATA SYSTEMS

Microcomputer based management systems

Designed for professional
A/E offices by computer
professionals & architects.

Call for details

(415) 552-2001
555 De Haro St.
San Francisco, 94107
or
(213) 479-6022
10960 Wilshire Blvd.
Los Angeles, 90024



FINE ARCHITECTURAL WOODWORK

- Proud of our Installations,
- Proud of our Craftsmen.

415-285-5300
1237 Minnesota Street, San Francisco, CA 94107

Residential Energy Standards

by Lee J. Goldin and Arturo Gándara

Four years ago, the California Energy Commission (CEC) initiated proceedings to develop new residential energy standards. All segments of the building industry helped develop the standards through extensive public hearings. The new standards were approved by the State Building Standards Commission in September, 1981, and slated to go into effect on July 13, 1982.

But four separate bills are pending in the California legislature to postpone the effective date of the standards by up to two years. A media blitz, led by the California Building Industry Association (CBIA), is underway to convince Californians that the energy standards are expensive and may be unnecessary. Since the residential energy standards have a vital impact on the practice of architecture in California, **Architecture California** invited CBIA president Lee J. Goldin and CEC Commissioner Arturo Gándara to answer questions raised about the new standards.

How will the energy standards affect housing costs?

CBIA: CEC says the new residential energy standards will save California home buyers millions of dollars in fuel costs over the next 30 years. What it doesn't say is that the new standards will add \$3,000 to the cost of a typical production home built 95 percent of the time in this state. That means it will take 10 to 15 years before a new home buyer's utility bill savings will offset higher mortgage payments.

The only kind of home that will cost \$1,900 or less for additional energy conservation features is a passive solar home with half of its slab floor left uncarpeted to act as thermal mass. Passive solar homes can be built on only 60 percent of the available lots in the state, and are built less than five percent of the time. Using CEC assumptions of 13 percent interest rates, tax credits, and \$1,900 in added purchase costs, utility bill savings would offset the added costs for a passive solar home in five years in Fresno, eight years in Oakland, and 10 years in Sacramento, according to CEC staff testimony at the June 12, 1981 hearing.

At a time when only seven percent of this state's households can afford a conventionally financed, median priced home, increasing a home's operating costs for the first 10 to 15 years of ownership makes little sense. What makes even less sense is the nonexistent cost benefit to the typical California householder who stays in that home for only seven years.

The average price of new homes in California has risen 200 percent in the past 10 years, to \$120,000. Recent studies by the United States League of Savings Associations show that for every \$1,000 increase in the price of a new home in the affordable range (\$60,000 to \$80,000), over 80,000 households are priced out of the home market. Adding \$3,000 to the cost of a new home for energy conservation features hurts consumers and hurts a housing industry that Senate President Pro Tempore David Roberti has said is "in a state of depression which threatens to drag the rest of the economy down with it." Representatives of major lending institutions have told CBIA that lenders will not change loan qualification requirements simply because higher-priced homes are more energy efficient.

CEC: Based on cost data supplied by CBIA under contract to CEC, 82 percent of new homes could meet the standards for additional purchase costs of \$1,900 or less. This is only about one to three percent of the typical new home selling price in an era when prices have been increasing 16 percent per year. Even at 17 percent interest rates, this amount amortized over 30 years adds only about \$27 to monthly mortgage payments.

Although the standards do increase direct monthly housing costs, the savings they produce in utility bills exceed these costs within one to two years. In reality, the standards will make housing *more affordable* to those who can least afford rapidly rising energy bills—buyers of \$60,000–\$80,000 houses. Providing these home buyers with less efficient homes simply means that the owners will have no protection as utility bills become a dominant housing cost.

The new standards may, in fact, increase new home sales. Faced with rapidly rising utility rates, new home buyers increasingly will demand energy efficient housing. The new standards will reduce utility bills as much as 50 percent compared to currently built homes and 75 percent compared to older homes.

Lenders universally agree that the costs of the standards are too small to negatively affect their lending procedures. Under traditional lending practices, only 1,000 potential buyers would be priced out of the market by a \$1,000 price increase, rather than the 80,000 claimed by CBIA. Both primary and secondary lenders, however, have begun to consider the positive effects of energy conservation features in their lending practices—effectively increasing the number of qualified borrowers. Innovative builders and lenders have been working together to market energy efficient housing for several years.

Will the energy standards save energy?

CBIA: Homes built under present energy standards adopted by CEC in 1977 already must be fully insulated and weather stripped. CEC attempts to create the impression that the new energy standards will create a 75 percent saving of energy used in existing houses. Part of this phantom savings results from CEC's double counting which includes savings *already* achieved. By CEC estimates, cur-

rent homes are 50 percent more energy efficient than those built prior to 1975. Where is the urgency for new standards that theoretically will increase energy efficiency by another 25 percent at such a high cost to the consumer? It's the law of diminishing returns. Consumers will be spending more to save a smaller chunk of their utility bills.

The energy savings from such energy conservation features as double pane windows, R-30 ceiling insulation, R-19 wall and floor insulation are theoretical. The need for them is based upon CEC computer calculations that have not been field tested. No actual proof exists to show how much energy they will save or if, indeed, they are necessary.

CEC: The computer models used by CEC were supported by virtually all participants in the standards hearings, including CBIA. It seems inconsistent that CBIA questions use of these models here while their members continue to use the very same models. Of course, actual energy consumption can vary from computer predictions if occupant behavior differs widely from that assumed in the model. But we have found in recent field tests that actual energy use, when averaged across several houses, agrees with predicted energy consumption within about 10 percent. This small variation has no significant effect on the cost-effectiveness of the new standards.

Do the energy standards affect indoor air pollution?

CBIA: Increased indoor air pollution will occur due to "tighter" houses required by the new standards. The effect on the home dweller's health of increased concentrations of formaldehyde, radon, tobacco smoke, indoor combustion products, micro-organisms, allergens and moisture has been studied recently by both the National Academy of Sciences and the California Department of Consumer Affairs. Neither group has a solution to the indoor air pollution problem.

CBIA expressed concern during CEC hearings that air-to-air heat exchangers required in conventional homes in four climate zones may be neither available nor maintainable—only one distributor markets the device in California. If an air-to-air heat exchanger is out of service, the air change rates in that home can go below the minimum value for safe air

quality recommended by Lawrence Berkeley Laboratory.

CEC: During the rulemaking proceedings, CBIA actually took a stand contrary to its current position and supported *more* restrictive air infiltration standards, and argued against the requirement for air-to-air heat exchangers in "tight" buildings. The new standards, in fact, maintain air infiltration rates typical of current state and national levels. Experts from Lawrence Berkeley Laboratory, the pre-eminent research laboratory on indoor air pollution, testified that the new standards are far too conservative to impose health risks on building occupants.

Can the energy standards be enforced?

CBIA: As of July 13, 1982, the responsibility for allowing any new home to be built in California will fall upon local building officials who have little or no understanding of the new standards. Normally, two

years pass between the publication of a building code standard and its adoption at the local level. Building officials had only *three months*—April through June—to be trained to enforce the most complex and far-reaching changes ever made to the building code.

Even though the standards were approved in January, training was delayed until April, awaiting CEC production of the main working documents, one Energy Conservation Manual for each of 16 climate zones. The CEC currently is producing an errata sheet that makes some information in the current manuals no longer satisfactory to meet the new standards.

For example, a builder in Pixley, California who follows the current Appendix 3, Climate Zone 13 example will not meet the new standards—the errata sheet will change the value of the shading coefficients used in the example. This means even builders and building officials who've been minimally trained or who are using the current manuals may

be building or approving homes which do not meet the standards.

There are 16 different sets of standards for officials to cope with, one for each California climate zone. But there are five different climate zones in Los Angeles County, four in San Diego County, three in eight other counties, and two in seven more counties. Within each set of the 16 different standards, there are five different ways to comply with the standard. Each of the five ways will result in different requirements to meet the same standard. So in Los Angeles County, for example, there are 25 ways to meet the standards.

Local building officials, inspectors, and plan checkers must understand *all* of these methods. City and county governments statewide already are strapped for cash. The new procedures will be costly to administer, interpret and implement. Who will pay for the added manpower and training needed?

CEC: The new standards were adopted in June, 1981. More than one year will have passed before their effective date—longer than is typical for other changes to the State Building Code. Statewide training programs for the standards already are in operation for building officials, architects, and heating and cooling system installers, and statewide community colleges are offering the general public courses on the standards. CBIA, however, has refused a CEC contract to train its membership and has attempted to discourage participation by its chapters.

The climate zone boundaries and compliance methods resulted from public requests. The counties helped define the climate zones. CBIA and other participants requested several ways to comply for the sake of flexibility. CBIA now unfairly characterizes flexibility as complexity.

The standards permit compliance through a prescriptive *or* performance approach. The prescriptive approach requires the builder to include a set of measures in one of several Alternative Component Packages predetermined to meet the energy budget. The performance approach allows the builder to use any combination of measures that can be demonstrated to meet the energy budget. Many builders will use the easier, but less flexible, prescriptive approach and have no need to use the performance approach. Builders and designers, however, wanted the performance approach

WIDEST SELECTION OF ROOF TILES AND ACCESSORIES

ESPAÑA™
Mission Tile

Super
SHAKETILE™

Colonial
SLATE

Elegant
CHATEAU™

Rustic
SHAKE

Specifications • Design & Installation Recommendations



CALIFORNIA TILE
A LIFETILE COMPANY

714/822-4407
Phone **415/657-0414**

fire-safe
Beautiful roofs for the good life

to increase design flexibility.

CEC developed the "point system," as requested by CBIA, to provide a simplified performance compliance method. The point system reflects extensive CBIA and other public input. It provides the simplest, most accurate, and most comprehensive home energy analysis tool available today. A builder simply looks up point values associated with each design feature and measure of a given house and adds up the points. If the score equals or exceeds zero, the house design meets the standards. For the added flexibility, the builder need only spend several minutes looking up numbers, writing them on a one-page checklist, and totaling them.

Are there alternatives to the new energy standards?

CBIA: As an alternative to the disaster that will occur if the new standards are implemented July 13th, CBIA is seeking a two-year delay and is proposing to construct test homes in representative hous-

ing developments around the state to confirm CEC computer projections of energy savings.

Each set of homes would be oriented identically and all homes would be occupied. Some would be built to existing standards, some to new standards, some would conform to CBIA energy policy guidelines, and others to standards working successfully in other states. The energy consumption of all homes would be measured by separate metering of the heating, cooling and domestic hot water systems. CBIA believes that conventional homes built to our specifications can be shown to meet the CEC's performance budget based upon measured energy consumption. This goal can be reached at a lower cost and with much less complex and more flexible standards than those presently scheduled to go into effect. If the present standards go into effect July 13th, the greatest energy savings will come from homes that won't be built.

CEC: CBIA's proposal cannot substitute for the totally public proceeding used to

develop the standards. All segments of the building industry, public interest groups, and building departments provided expert advice in developing the standards.

CBIA can take advantage of the standards' flexibility to build by its energy policy guidelines. CBIA can use them to develop its own Alternative Component Package or use any of the performance approach compliance methods.

All Californians will suffer if the standards are delayed two years. Such a delay would lock several hundred thousand home buyers into unnecessarily energy inefficient homes. These homes would consume additional energy equivalent to two million barrels of oil per year in unnecessary energy costs. Over 10 years, homes built during a proposed two year delay period would cost Californians nearly \$1 billion in additional energy expenditures. CBIA cannot justify this economic burden or, in good conscience, ask the legislature to impose it on state consumers.



*Roofs of
Distinction*

Berridge Manufacturing Co.

Save installation time and cost while providing a lasting architectural finish. Available in twelve colors and over ten different styles.

Prefinished metal roofing systems

**Standing seams
Batten seams
Mansard frames
Equipment screens
Bermuda shakes
Rustic shakes
Victorian shakes
Spanish tile
Soffit
Facades**

Available through: **DELTA THERM INC.**/1625 Remuda Lane, San Jose, CA 95112/(408) 280-7278/Outside California call toll free 1-800-231-8127

Winners and Losers— the Politics of Energy Policy

by Charles Eley, AIA

The new residential energy standards scheduled to take effect this year are the latest upshot of California's energy policy. Like love and war, there are few rules in the game of energy policy making.

Within the California Energy Commission, there are no requirements for players, although your chances of winning are vastly improved if you can claim a constituency, speak in technical prose, appear to have political clout, project an image of altruism and have an ample source of funds. Everyone in the building industry is encouraged to play the policy making game in spite of the expense, since the odds are against you if you remain on the sidelines.

The traditional justification for standards—rules in general—is that they offer an overall positive benefit to society; that, in the end, there will be more winners than losers. But some sectors of the building industry, specialty contractors and product manufacturers view the development of energy standards as a zero-sum game, with just as many losers as winners.

The clear winners among the manufacturers and specialty contractors are those whose products are favored by the standards: insulation, caulking and sealants, masonry products (thermal mass), glass doors for fireplaces, air-to-air heat exchangers. The clear losers are the manufacturers and specialty contractors whose products are discouraged by the standards: electric resistant heaters, pre-manufactured log homes, etc.

Architects and engineers are also winners, since the standards recognize *design* as an important factor in energy performance. Passive solar design services, for instance, are now free to compete with insulation and other material products in the quest for energy conservation.

The issue raised by the California Building Industry Association (CBIA), however, questions the fundamental justification for the standards and predicts more losers than winners. It is difficult to mediate the squabble between CBIA and the

California Energy Commission on the cost-effectiveness of the energy standards. It is possible to spend as little as \$800 to comply with the standards, but compliance could cost \$3,000 or more. That is the nature of performance standards which, like these, impose no specific requirements. There is an inherent wide range of cost, depending on site constraints, the building program and the ingenuity of the designer. Analyzing the latest claims on cost is nearly impossible, since the issue has been elevated to the legislature—a different arena with a completely different set of rules, less analytical rigor and more old time politics.

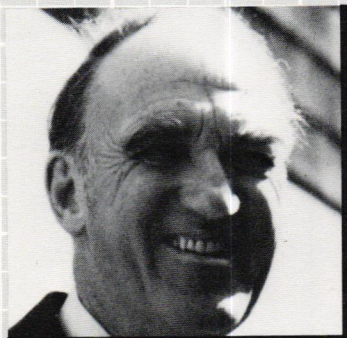
The crux of the issue is really housing affordability, and it is not fair to place this entire burden on the shoulders of the Energy Commission. Unfortunately, the energy standards arrive at a time when the housing industry is depressed. Housing is expensive in California because of many complex reasons, not the least of which is the speculative market of recent years. The issue of affordable housing should not be associated directly with energy conservation. Of all the state and local building standards, none have passed a more rigorous test of cost-effectiveness than the new residential energy standards.

The new standards will, in the very near future, increase the market for new housing by lowering the cost of home ownership. This will increase the market, and we will all be winners. In the meantime, the best strategy for all of us in the housing industry is to address the fundamental problem of affordable housing. Rather than lament the energy requirements, let us pursue new and imaginative solutions to the problem of affordable housing with the tool we know best—architectural design.

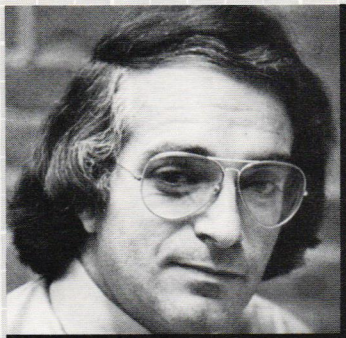
Charles Eley, AIA maintains an architectural and consulting practice in San Francisco, specializing in energy policy analysis and computer modeling. He serves as Energy Consultant to the California Council, the American Institute of Architects.

C A L I F O R N I A ' S F E L L O W S

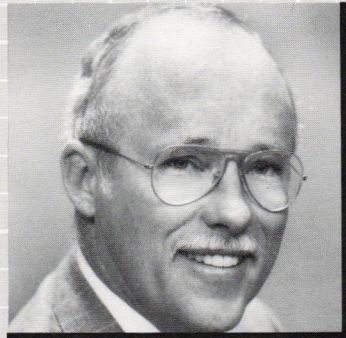
Sixteen California architects became Fellows of The American Institute of Architects at its 1982 Convention in Hawaii last month. Fellowship is conferred on AIA members who have made significant contributions to the advancement of the profession in the areas of architectural practice, construction, design, education, government or industry, historic preservation, literature, public service, research, service to the profession or urban design. **Architecture California** salutes California's honored architects with a portfolio of projects.



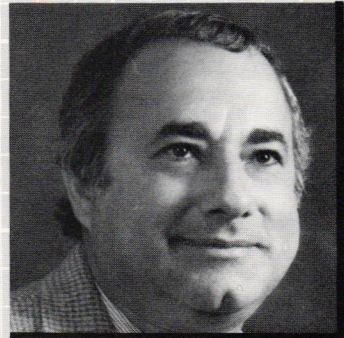
James B. Aitken, FAIA
East Bay Chapter



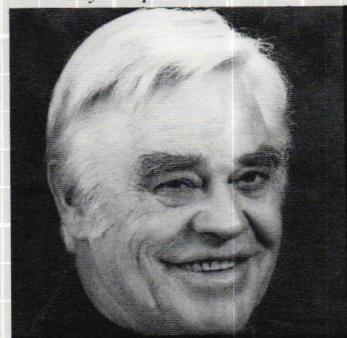
Frederic A. Bertram, FAIA
Los Angeles Chapter



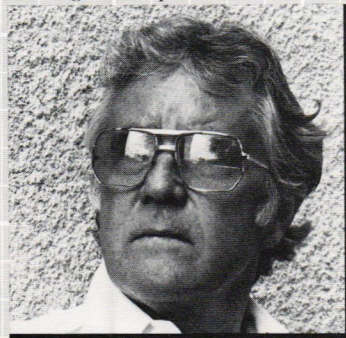
James R. Bonar, FAIA
Los Angeles Chapter



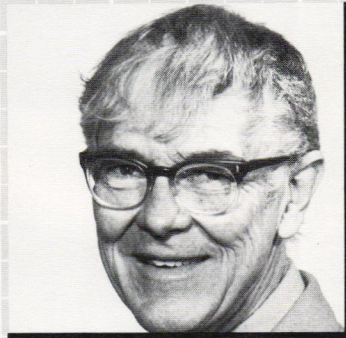
Arthur C. Danielian, FAIA
Orange County Chapter



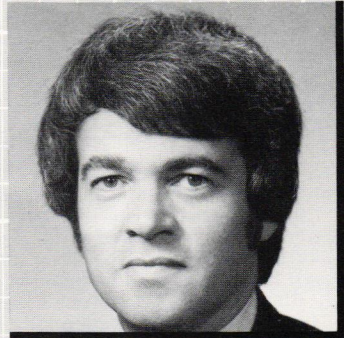
Gerald L. Erickson, FAIA
Santa Clara Valley Chapter



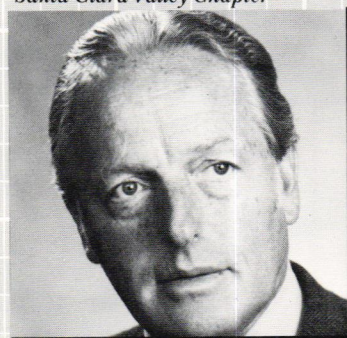
Donald C. Hensman, FAIA
Los Angeles Chapter



Paul S. Hoag, FAIA
Los Angeles Chapter



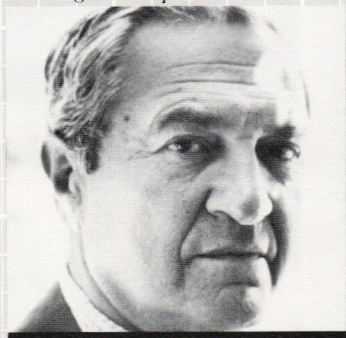
Edward D. McCrary, FAIA
San Francisco Chapter



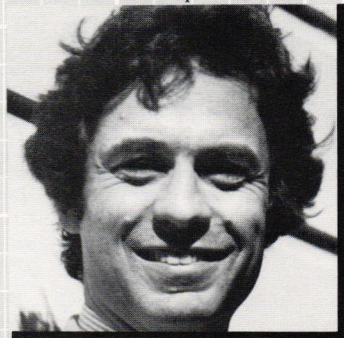
Dale Naegle, FAIA
San Diego Chapter



Piercy K. Reibsamen, FAIA
Los Angeles Chapter



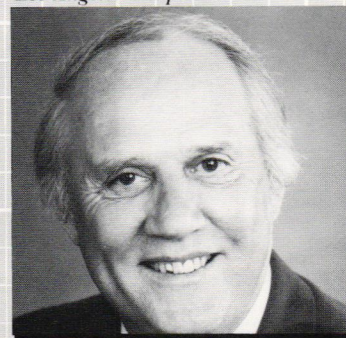
H. David Sokoloff, FAIA
San Francisco Chapter



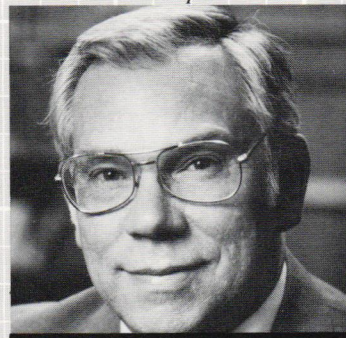
Daniel Solomon, FAIA
San Francisco Chapter



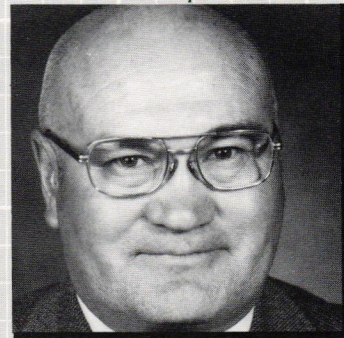
Goodwin B. Steinberg, FAIA
Santa Clara Valley Chapter



Thomas B. Tucker, FAIA
San Diego Chapter



Dean F. Unger, FAIA
Central Valley Chapter



Richard Wolf, FAIA
San Francisco Chapter

Molecular Biology Institute,
University of California,
Los Angeles

The Molecular Biology Institute, containing the Parvin Foundation Cancer Research Center, is a major scientific research and teaching facility for which the fundamental design criterion was to provide the finest, most up-to-date and flexible research laboratory facility possible. The basic premise was to move all "fixed" nonlab uses to the periphery of a lab cluster and to provide flexibility in equipment and mechanical services in order to permit optimum use of these sophisticated laboratories regardless of what future directions research might take. The exterior design directly expresses the functions within.

Lab clusters are seen with their mechanical chases on the exterior, which progressively step back as they descend, reflecting the reduced amount and size of supply and exhaust lines as they descend from the mechanical spaces on the top floor.

*Piercy K. Reibsam, FAIA
Reibsam, Nickels & Rex Architects*

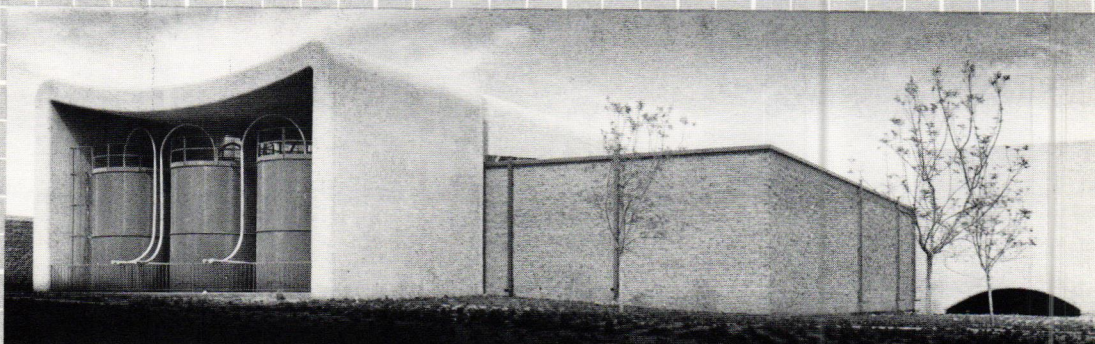


Wayne Thom

Becton-Dickinson's Falcon
Plastics Plant, Oxnard

The 270,000-square-foot plastics plant's soft corners and curves express the fluid nature of its molded medical products. Curved forms also screen rooftop air handlers and form canopies over silos. We selected various flowering trees which bloom sequentially year-round to plant outside the office windows opening onto three interior garden courts. Machinery groups were color-identified to encourage self-identification of small work teams. In competition with 1,500 entries, this building was selected as one of the "Top Ten Plants of 1970," the only unanimous choice of the judges and the only California winner. The award was given for functional efficiency, flexibility, aesthetics and economy of construction.

*Paul Sterling Hoag, FAIA
Paul Sterling Hoag, Inc.*



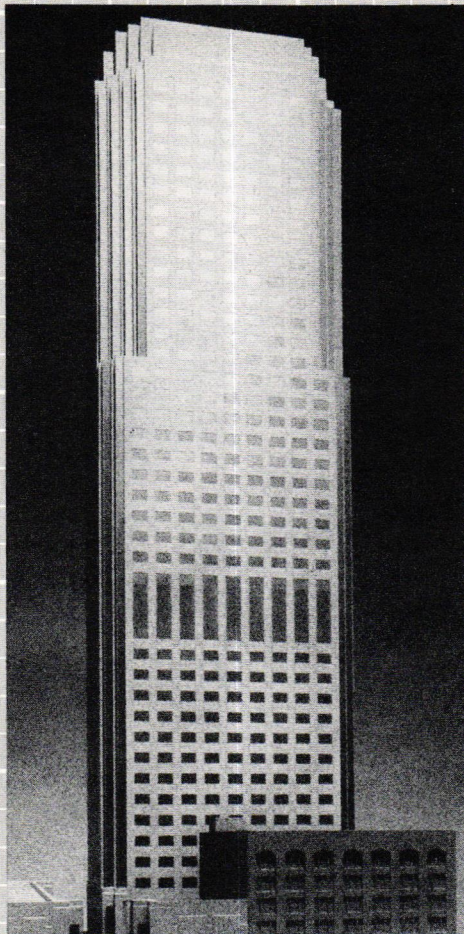
Richard Fish

South Bay Regional Center,
Chula Vista

Houses of detention and courtrooms are historically cold, stark and uninviting. They usually instill a sense of fear, distrust and depression in both the inmate and the surrounding community. We sought to reverse this image in our innovative design for the 350,000-square-foot South Bay Regional Center. Park-like landscaping acts as a buffer between the building and the community, while easing the anxiety of the Center's pedestrian traffic. A skylit garden atrium lobby area serves as the focal point for the courtrooms centered around it. All of the 400-inmate-capacity detention units receive natural light, and each has a view of a naturally landscaped environment.

*Thomas B. Tucker, FAIA
Tucker, Sadler & Associates*

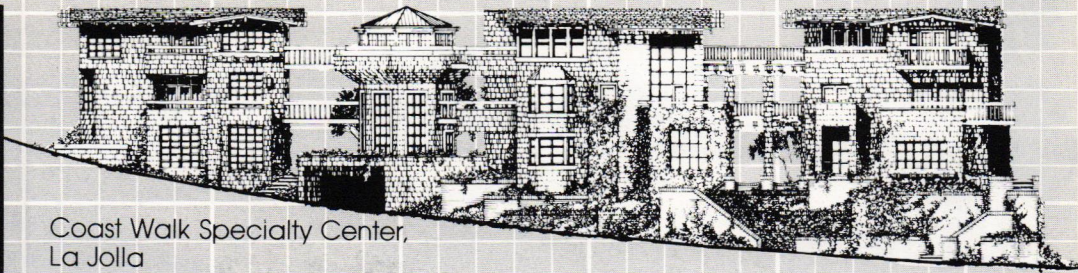




Five Fremont Center, San Francisco

This 42-story office tower has a total area of 950,000 square feet. The exterior facade of Italian travertine marble and silver reflective glass with continuous vertical "prisms" at the tower's corners creates ever-changing patterns of light and shadow. The base of the tower is framed in polished black African granite. The building features advanced life-safety systems, underfloor telephone and electrical ducts, and ceiling-mounted air-conditioning units.

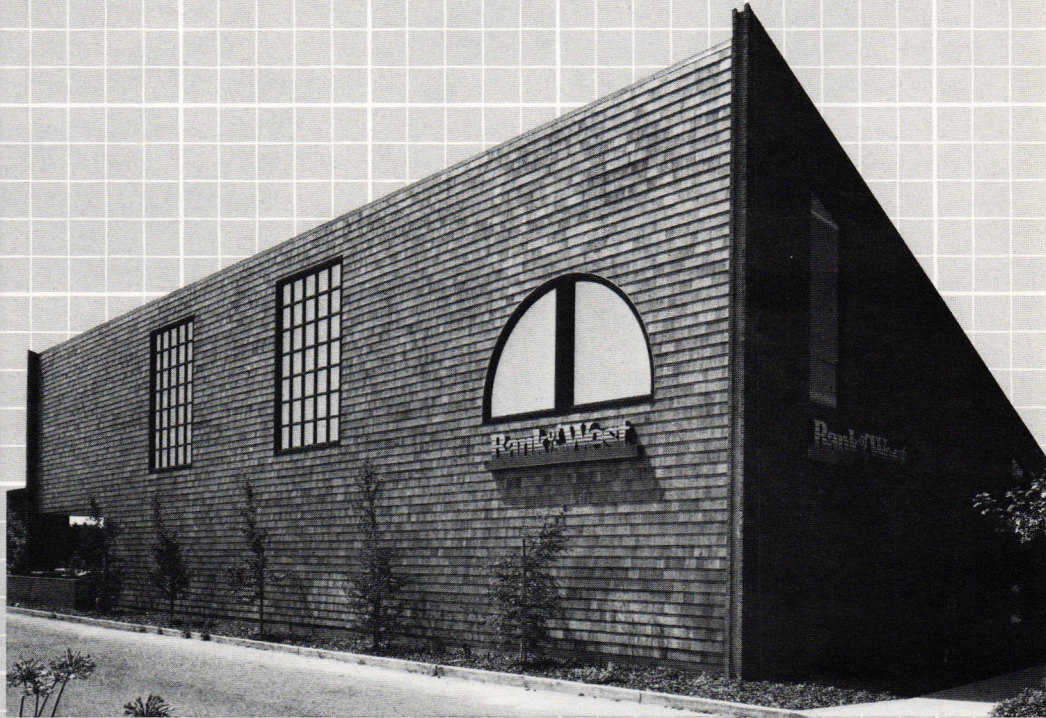
*Edward D. McCrory, FAIA
Skidmore, Owings & Merrill*



Coast Walk Specialty Center, La Jolla

The design of Coast Walk carefully blends the new structure into the fabric of the existing village community. Constructed over a hidden underground parking structure, Coast Walk steps its way up the hill in a multi-faceted series of residential-scale shops and offices, on three different levels, culminating in a single-story facade opening onto the village street above, with its sidewalk restaurants, shops and boutiques. The Coast Walk shops are oriented around two centrally located, three-level courts that provide circulation as well as "see-through" to the cove and ocean beyond.

*Dale W. Naegle, FAIA
Dale Naegle, FAIA Architecture and Planning*

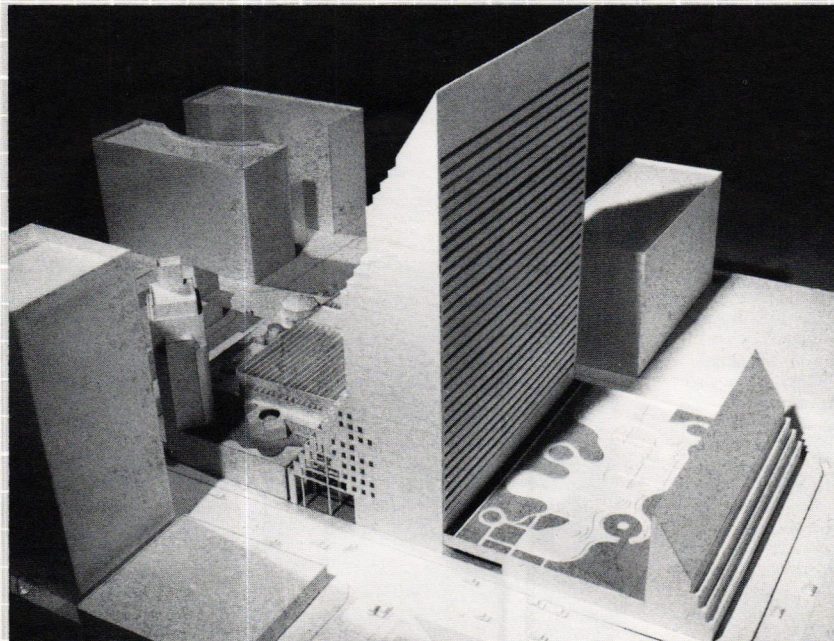


Bank of the West, Fremont

Jane Lidz

This small bank building maintains its identity among its larger neighbors while remaining in harmony with architecture of the surrounding center through its site orientation and strong geometric form. With the exception of the shingle siding, the exterior materials, details and streetscape were borrowed from the surrounding buildings. The officers' area is small-scaled, intimate space with low ceilings and a general living-room ambience. The tellers' area and work stations are located in a lofty, north-lighted space crossed by a small bridge carrying the climate system, teller line lighting and interior planting.

*Gerald L. Erickson, FAIA
Higgins & Root Associates, Architects, A.I.A.*

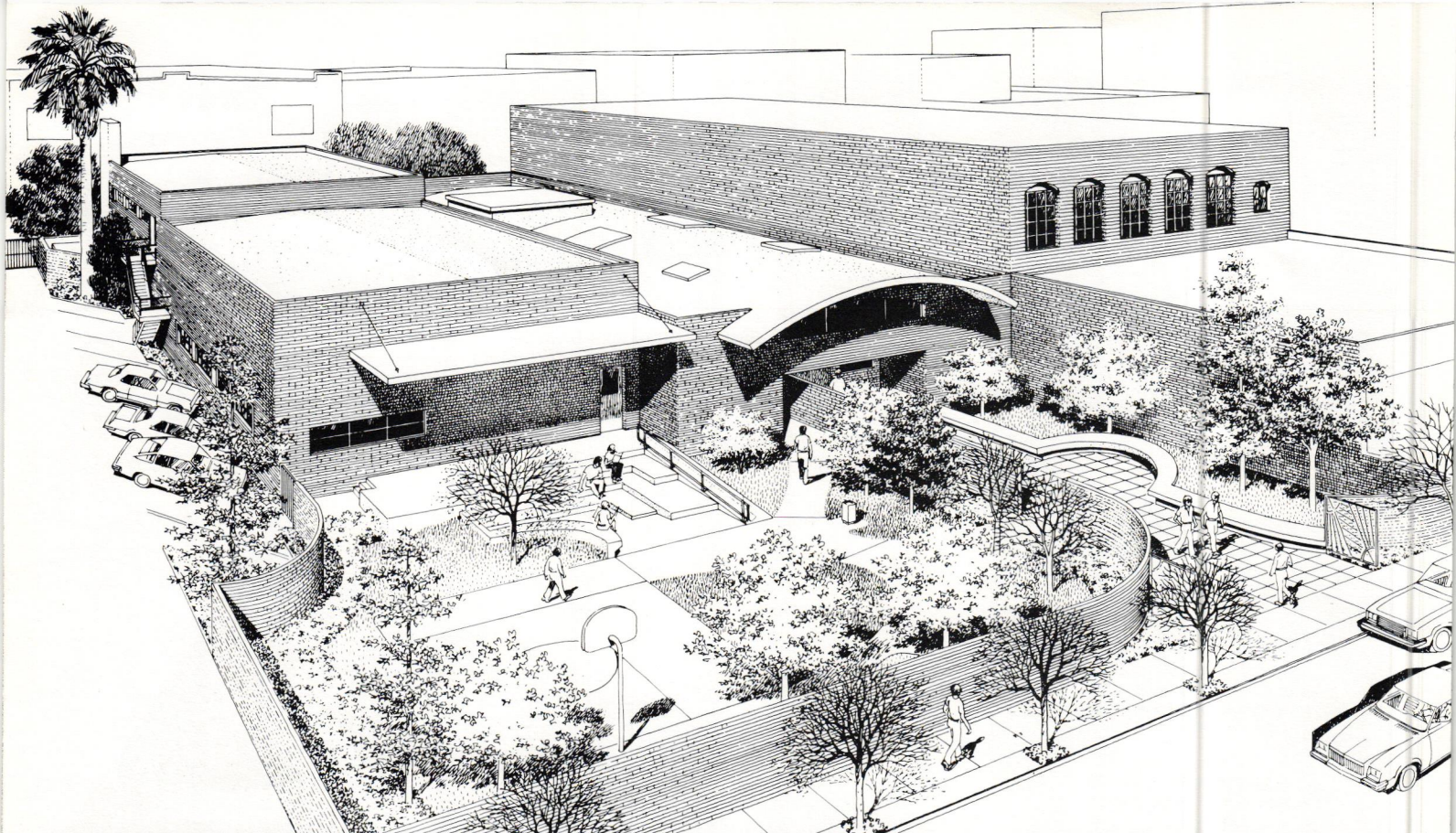


Junebug Clark

The Wilshire Center, Los Angeles

The 12-story, 76,848-square-foot Pellissier Building and the 2,344-seat Wilshire Theatre were built in 1931, and both are listed in the National Register of Historic Places and designated as Cultural Historic Landmarks by the City of Los Angeles. The existing buildings will be complemented by a major, new development in a two-phase project. Phase I is the restoration of the existing buildings and Phase II is the construction of a 30-story, 850,000-square-foot office building. The Wilshire Theatre will be renovated for multi-functional cinema, legitimate theater and concert-hall use. The 4.4-acre site includes an entire city block in the mid-Wilshire area. The primary design objective is to integrate the new buildings with the existing and to create one identity for the entire project.

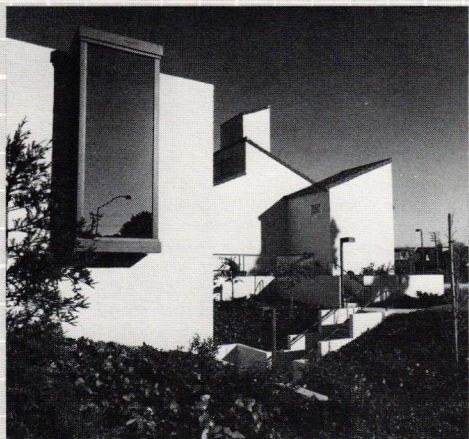
*Frederick A. Bertram, FAIA
Rossotti Associates*



Los Angeles Community Design Center Projects, Los Angeles

Many of the Los Angeles Community Design Center projects, directed by James Bonar, FAIA from 1972 to 1981, involved the adaptive reuse of old, sometimes derelict buildings to the current needs of the low- and moderate-income residents of the inner city. One example is the housing under construction for the Skid Row Development Corporation. In this project, Community Design Center staff architect Ron Silveira, AIA converted three former warehouse buildings into a shelter for 130 of the men and women who currently sleep in the alleys and doorways of the central business district.

James Bonar, FAIA
Daniel L. Dworsky, FAIA Architect and Associates



Joshua Feiwel

Mountain View Police and Fire Facility, Mountain View

The Mountain View Police and Fire Facility is a 45,000-square-foot passive and active solar office building. The two-story building houses two distinct yet contradictory user groups. Police departments by nature are introverted and security-oriented, while Fire Administration traditionally is open and interested in exchange with the public. The design challenge included harmonizing the users' needs, while creating a facility that reflects the City's goals of energy and conservation, and reflects the history, materials and scale of its well-established neighborhood.

Goodwin B. Steinberg, FAIA
Goodwin B. Steinberg Associates

Bachelor Enlisted Quarters, Submarine Base, San Diego

This project, designed and constructed by Homer Delawie Associates AIA under the direction of Richard Wolf, FAIA, was the first increment of a multi-story bachelor enlisted quarters complex on a very constricted site. The complex was planned in clusters, consisting of two towers and an elevator core, oriented around a garden court and housing 396 men in 33 apartment modules.

Richard Wolf, FAIA
Director of Design,
Western Division Naval Facilities
Engineering Command



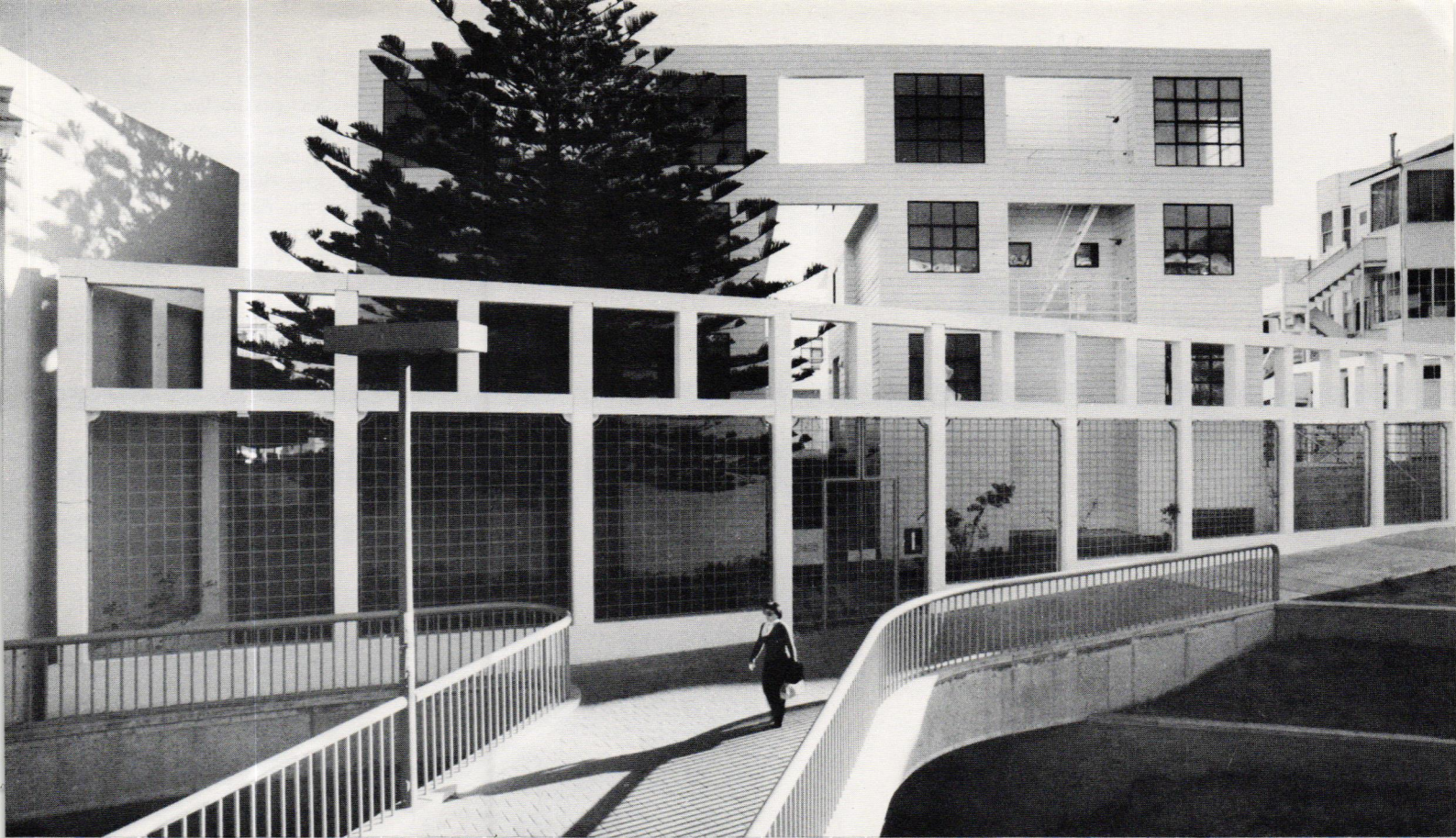
Michael H. Denny

Hensman Residence, Los Angeles

The site consisted of a bank rising almost vertically and terminating in a small level space some 23 feet above the street. The scheme is a 24-square-foot box at street level to house cars. Directly above is a 24-square-foot guest suite. The third level contains the master bath and bedroom, connected to the living area through a gallery. The living room, den and kitchen are on the only available level space.

Donald Charles Hensman, FAIA
Buff & Hensman Architects

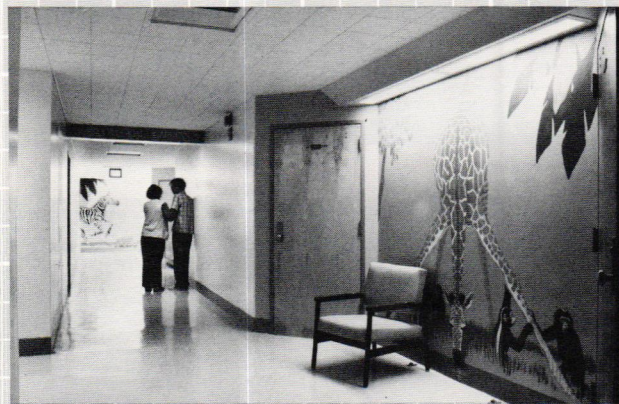




Castro Common, San Francisco

Infill housing on an awkward and under-used downtown site, the Common was conceived principally for gay people who populate the neighborhood. The urban design qualities and unit planning respond to living patterns somewhat different from those in conventional housing. The design makes use of a new zoning provision that permits tandem houses with a quiet internal court between front and rear units. All units have private entrances off this courtyard. The larger units are designed for purchase by two single people with two master bedrooms and bath with equal amenity and privacy for each. The 12 units average 950 square feet each. Most units have two-story spaces, fireplaces, and private open space. The building occupies a "key lot" which is perpendicular to the rest of the sites on the block. The building takes its imagery from the backs of the surrounding buildings with their white clapboard siding and fragile layers of stairs, decks and rails.

*Daniel Solomon, FAIA
Daniel Solomon and Associates*

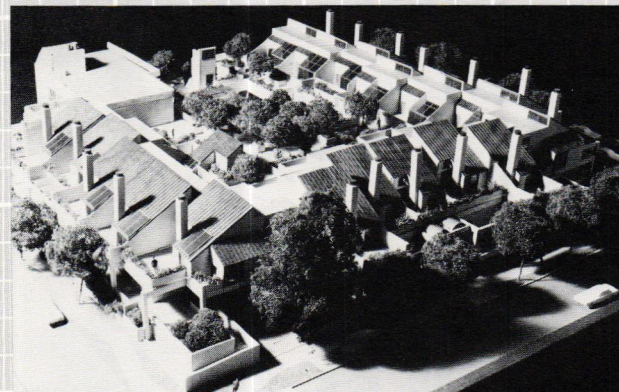


Jeff Weissman Photography

Napa State Hospital, Napa

The Hospital, serving 800 mentally ill and 600 developmentally disabled residents, is being remodeled to acceptable fire and life-safety standards. Eight codes have to be complied with, and 11 state departments have jurisdiction and their own objectives. Instead of simplifying problems, we have to invent ways to manage complexity.

*H. David Sokoloff, FAIA
Sokoloff/Bennett Associates*

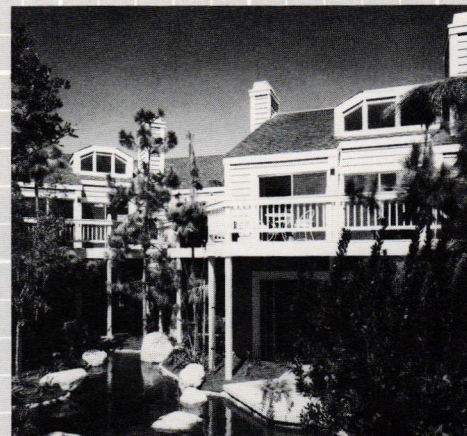


Steve Simmons

Central Park Plaza, Davis

The two major challenges we faced were (1) integrating three distinct uses—retail, office and living spaces—and blending the development into the existing fabric of the community; and (2) developing an energy-conserving system to handle these various uses.

*Dean F. Unger, FAIA
Dean F. Unger, FAIA, Inc.*



Pentridge Cove, Costa Mesa

A suburban infill development, this project embraces a waterscape program and mature landscaping to create a unique living environment. The 106-unit project (Phase I), situated on five acres, yields a density of 20 dwelling units per acre while maintaining privacy, spaciousness and a keen sense of identity. The stacked flat condominium units range in size from 870 square feet for a one-bedroom to 1,188 square feet for a two-bedroom. Units are staggered to provide visual relief in building massing and to create a sense of individuality and privacy, which is essential in high-density developments.

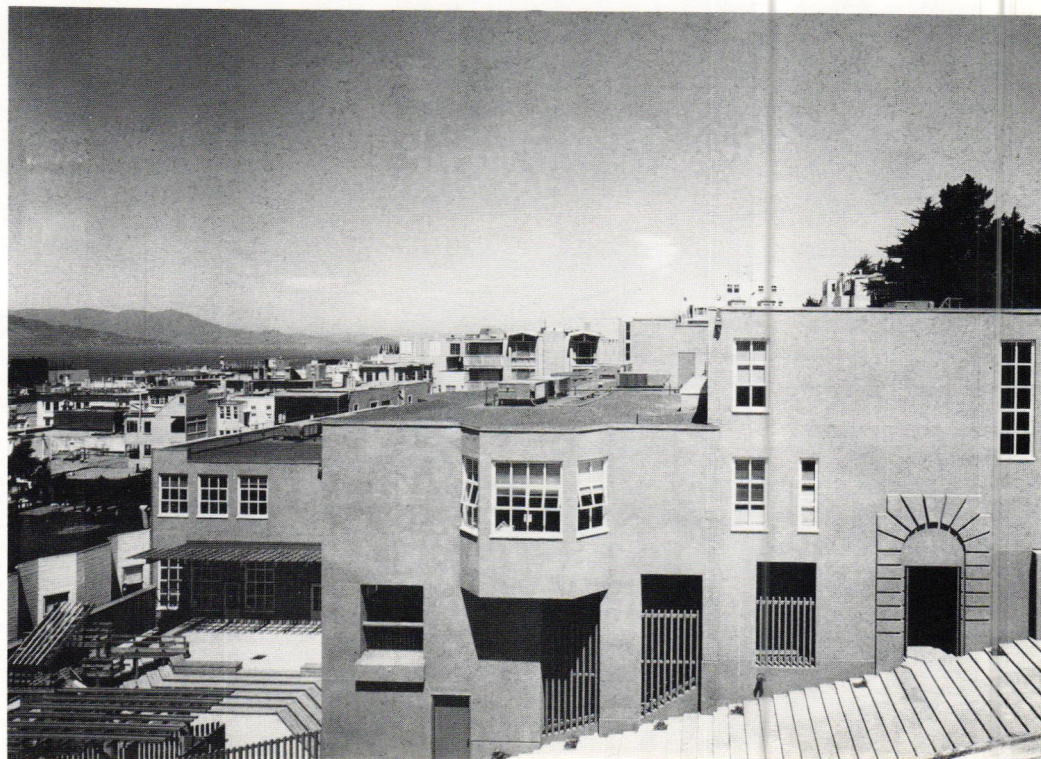
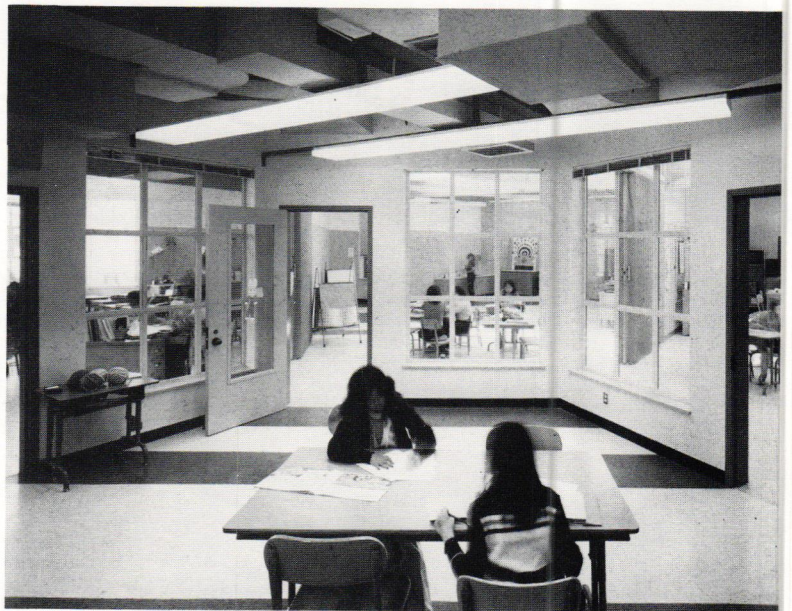
*Arthur C. Danielian, FAIA
Danielian Associates*

AIA Honor Award

Located near Coit Tower on San Francisco's Telegraph Hill, Garfield Elementary School replaced an existing elementary school which was inadequate for current seismic safety requirements. This three-story building, designed for stringent seismic safety, contains 10 classrooms, two kindergartens, and a multi-use space shared with the neighborhood. "This small elementary school fits comfortably into its residential setting, making admirable use of its difficult and constrained site," comments the Honor Awards jury.

The street front exterior design strongly reflects the character of the neighborhood's three-story walkup apartment buildings.

Garfield Elementary School, San Francisco



The overall design connects the school to its surroundings while placing the major source of noise beyond the hearing distance of most neighbors. The playground has been placed on the far side of the school, against the park that surrounds Coit Tower. "The building's bold orange and ochre color, its low-keyed simple materials, and its carefully organized but informal exterior give it dignity and warmth. An unpretentious but most commendable design solution," the jury comments.

Taking advantage of the city's mild climate, the school uses exterior passages and promenades, large openable windows and other openings to minimize the need for artificial

heating, cooling and lighting. This plan also opens up the school to the beauty of the surrounding city.

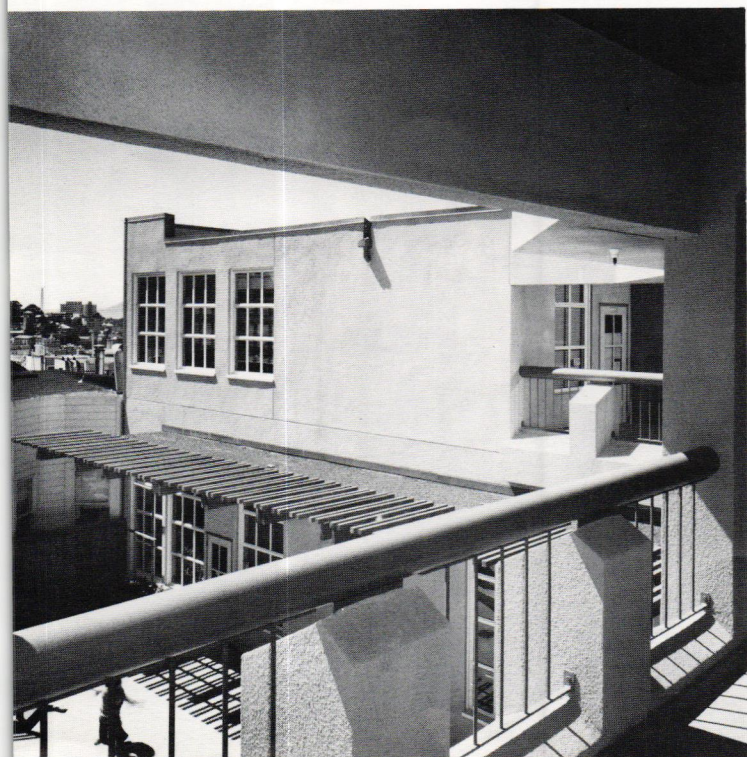
Classrooms are accessible from stairways off the upper and lower play areas. The administration offices are accessible from the street, while the multi-purpose area has a separate evening entry behind the building. Wheelchair access to the building is from the upper playground level; and throughout the building, it is provided for by an elevator. Solar collectors were installed on the roof to provide for domestic hot water.

1982 HONOR AWARD

Project:	Garfield Elementary School
Architect:	Esherrick Homsey Dodge and Davis
Principal in Charge:	George Homsey, FAIA
Project Architect:	Barry Baker
Owner:	San Francisco Unified School District
Structural Engineer:	Rutherford and Chekene
Mechanical Engineer:	Marion Cerbatos Tomasi, Inc.
Electrical Engineer:	Marion Cerbatos Tomasi, Inc.
Landscape Architect:	Richard Schadt Associates, Inc.
General Contractor:	Nibbi Brothers



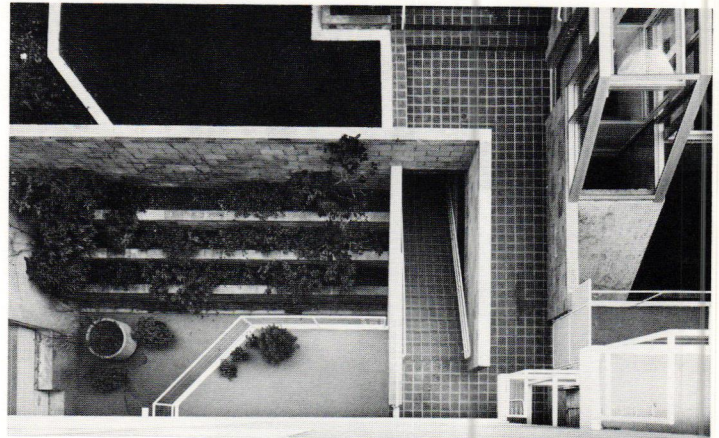
Photographs by Peter Aaron/ESTO



AIA Honor Award

Macondray Terrace is 13 residential condominiums built in a prime San Francisco residential area. The extremely steep site, undeveloped since before the 1906 earthquake, is bordered on one side by a charming pedestrian street, Macondray Lane, and on the other by a busy thoroughfare, Union Street. The primary social concern was that the building should be a good neighbor. "Located in a finely scaled residential area, this relatively large condominium complex relates quietly to its neighbors with well-proportioned setbacks and a carefully detailed exterior," comments the Honor Awards jury.

Macondray Terrace, San Francisco



A system of sprayed concrete and tiebacks under neighboring houses allows the project to use all of its difficult site. To adapt to the block pattern, the project was split into two buildings and connected by an inclined elevator which links parking, living levels and the two street entrances. "The glass-enclosed, inclined elevators connecting the various levels add to the overall quality of openness and grace which is inherent in the design," the jury comments.

The project responds to its two public facades, yet maintains a unity. The Union Street facade is formal and symmetrical, reflecting the strong pattern of Victorian facades on

the block. On Macondray, the two-story atrium conforms to the informal and rustic landscape of that block.

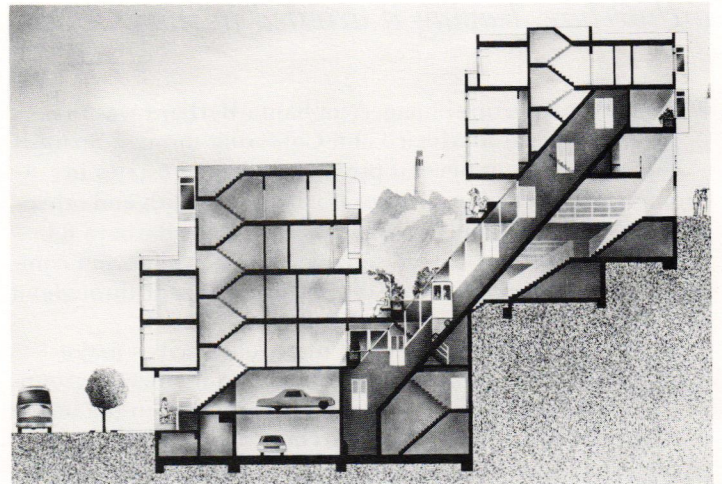
Confined by the planning code and by the needs to allow sunlight into the central garden and to avoid blocking views of nearby buildings, the condominiums are worked like a Chinese puzzle. Only the first two floors repeat plans; after that, each unit is different.

The building is extremely energy-efficient due to double glazed windows, heavy insulation and a minimum of exterior walls exposed to the elements. The handicapped have access by elevator to 11 of the 13 units.

1982 HONOR AWARD

Project:	Macondray Terrace
Architect:	Hood Miller Associates
Owner:	Hood Miller Properties and Farjam Corporation
Structural Engineer:	Shapiro Okino Hom and Associates
Mechanical Engineer:	J.W. McClenahan Company
Electrical Engineer:	Stehle Electric
Landscape Architect:	Paul Leffingwell
General Contractor:	Ralph Larsen & Son Inc.

Photographs by Richard Sexton, Matrix



Architectural Review in Santa Barbara:

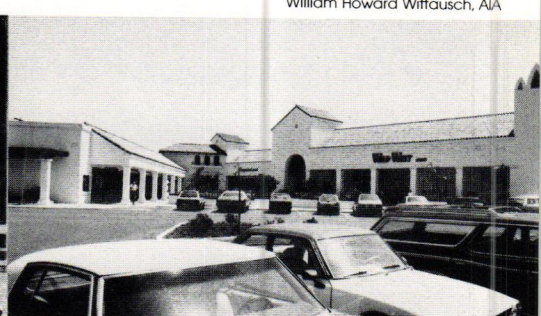
William Howard Wittausch, AIA



Santa Barbara Mission, 1786



Christian Science Church, 1931



Five Points Shopping Center, 1981

When people think of Santa Barbara, images of buildings with light colored walls, small openings and red tile roofs come to mind. The community of Santa Barbara has created a strong public policy to protect its rich architectural heritage and beautiful natural surroundings. But some local architects wonder if that policy is retarding the evolution of the city's architecture, leaving it arrested in time.

The architectural imagery of Santa Barbara was first introduced to Mexico and California through Spanish colonization. Several private residential estates in Montecito, designed by George Washington Smith and others, brought Spanish Revival architecture to Santa Barbara following the San Diego Exposition of 1915. Soon civic and commercial projects in the same style began to appear throughout the city.

In 1925, an earthquake leveled many of the city's major buildings. This event provided the impetus for citizens' groups who shared a common vision: to rebuild the city in the image of a Spanish town. The first City Architectural Board of Review (ABR) was commissioned to support this effort. When the ABR fulfilled its purpose, it was decommissioned in 1926.

The reconstruction effort set two important precedents for Santa Barbara. It demonstrated the ability of the private sector to mobilize quickly in an emergency and to work together to achieve common objectives. It also established the Hispanic character of Santa Barbara architecture.

With the postwar population boom and the growth of "smokeless" industry in the Goleta Valley, the City Architectural Board of Review was recommissioned in 1946, to "protect and preserve the natural and historic charm and beauty of the city." The ABR was to review and approve or deny plans for construction within the city boundaries.

The Historic Structures Ordinance, enacted in 1960, created the El Pueblo Viejo district and established strict architectural control over the area that has come to be known as "Old

Town." At the same time, the City Advisory Landmark Committee (ALC) was formed to identify and protect structures of historic and architectural significance. The private sector's influence in determining Santa Barbara's architectural style increasingly was taken over by the public sector. Although the intent of these commissions was to preserve the city's Hispanic style, a liberal policy prevailed and contemporary style buildings were approved.

The 1970s marked a significant change in public attitude. Angered by an oil spill from a nearby off-shore drilling platform in 1969, public reaction was directed against the oil industry for the accident which deposited gobs of crude oil and dying birds entrapped in the goo on Santa Barbara beaches. Outraged by the visual and economic impact of this blighted scene, Santa Barbara sued the oil company and won.

With the victory, a new sense of "community" emerged. Mounting public awareness of environmental pollution, energy and resource conservation, the relationship between the quality of life and population density, and population growth limits was evident. When the Environmental Protection Act was passed in 1974, the concerns that had sustained the citizen protest movement became public policy.

The design review process played an increasing role in shaping architectural projects. ABR's authority was expanded to include review of site planning, parking, traffic safety, landscaping, signs, colors, view protection, hillside development, and environmental impact. In 1977, the boundary of El Pueblo Viejo was expanded, as was the ALC's authority to review and approve designs of buildings adjacent to and/or across from the old town and in the vicinity of other landmark buildings. A frequent overlap of responsibility and conflict in the recommendations of the Architectural Board of Review and the Advisory Landmark Committee developed.

To educate the general public and to assist commissioners in evaluating designs, the City staff published architectural guidelines for both the ABR and the El Pueblo Viejo District. The guidelines were written in vague, general terms which, in effect, empowered the ABR to make design decisions. Yet guidelines for El Pueblo Viejo included specific design criteria and a glossary of architectural design elements.

As each edition of the guidelines was amended to reflect new levels of public awareness, a loss of continuity in policy and decision making resulted. The dual, and often conflicting, guidelines present a problem for architects who are confused

Evolution and Heritage

by William Howard Wittausch, AIA

as to their specific intent and frustrated by working at cross purposes with the design review decisions.

The liberal policies which previously permitted contemporary designs within the city have been replaced with vigorously conservative policies in the last five years. Both the ABR and the ALC believe they have a mandate to keep Santa Barbara a Spanish town. With the exception of an occasional Victorian, this implies that modern architecture cannot be approved. Even existing buildings, when remodeled, must become "Spanish."

Many Santa Barbara architects agree that some form of regulation is desirable and that regulations, by themselves, do not limit creativity or impair the chances for design excellence. But they are concerned that design review by committees using prescriptive "cookbook" guidelines to produce Hispanic architecture will, over time, have a detrimental effect on the community. And they fear that many landmark buildings constructed between 1926 and 1946, without benefit of design review, will become submerged in a background of clumsy, assertive, Hispanic copies.

Many projects with the potential to become fine examples of modern architecture—even contemporary interpretations of Hispanic style—are returned for redesign in a more traditional style. Hispanic designs which have poor scale or charac-

ter often are approved. The result is a loss of authenticity and the elimination of both good and bad, leaving a residue of commonplace architecture.

The architects who produced the many fine examples of Spanish Revival architecture in Santa Barbara were skilled and inspired. They were supported by appreciative patrons and encouraged by an enthusiastic community to indulge their architectural fantasies unencumbered by government regulations and exacting public review. The spirit that moved those architects came voluntarily, rather than through coercion by zealous over-regulation.

Santa Barbara's present design review commissions intend to achieve aesthetic unity through use of guidelines requiring a homogeneous design idiom. Inspired by a desire to return to roots, this regional spirit is sympathetic with the post modern movement and is a sign of the times. Yet imposing a regional style on designers with differing, albeit discriminating, tastes cannot be done without inviting reaction. How local architects respond to public sector control will determine the future of Santa Barbara's architectural imagery.

William Howard Wittausch, AIA is an architect and civil engineer practicing with his own firm, William Howard Wittausch, in Santa Barbara.

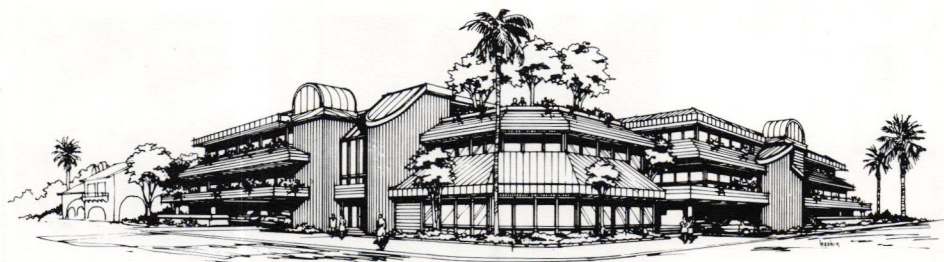


Figure 1

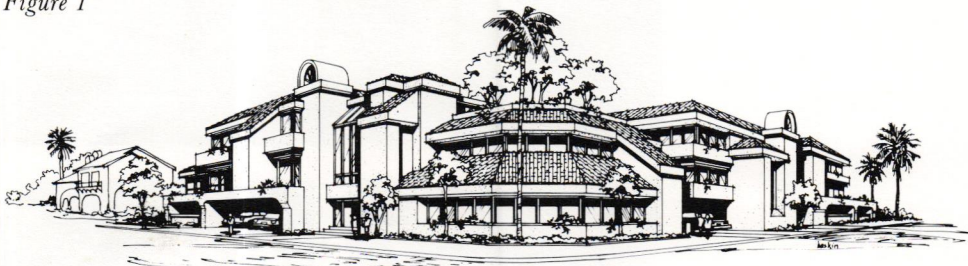


Figure 2

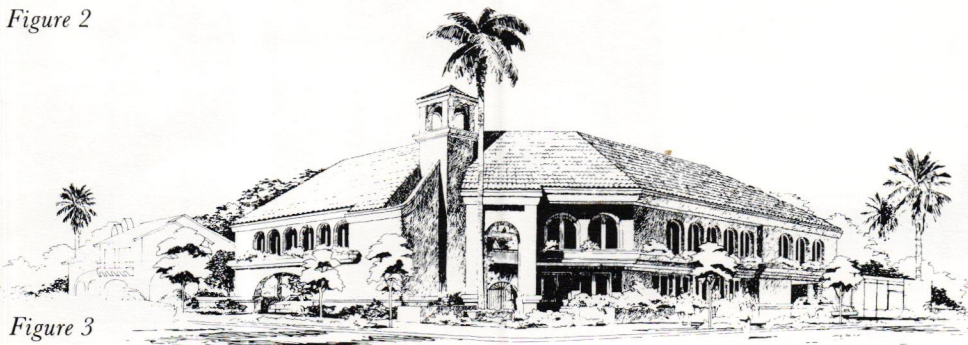


Figure 3

Evolution of a Design

The wood and glass structure shown in Figure 1 attempted to be compatible with the structure across the street, a contemporary, low-profile building done in the same vocabulary, and with the surrounding neighborhood, a transition area outside the city's downtown core, with a mixture of styles done mainly in wood. The ABR rejected this design, being more concerned with the overall texture of the community than with the scale and massing of the buildings in the immediate environment.

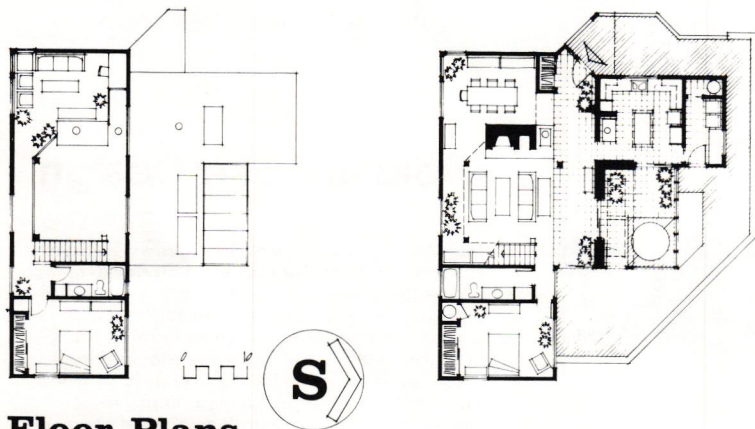
The redesigned building in Figure 2 is a sculptured architectural statement which weaves Hispanic stucco and tile with current design forms. The ABR rejected this design, saying it was too animated and not in keeping with traditional Hispanic design.

Figure 3, now under construction, is the type of building the ABR desires. In form, massing and material, this structure is compatible with the downtown core. But the building overpowers the graceful lines of the neighboring structure and has virtually no relationship to the prevailing texture of the neighborhood. By rigid adherence to the Spanish style, the city has created at this location the very hodgepodge of styles it seeks to avoid.

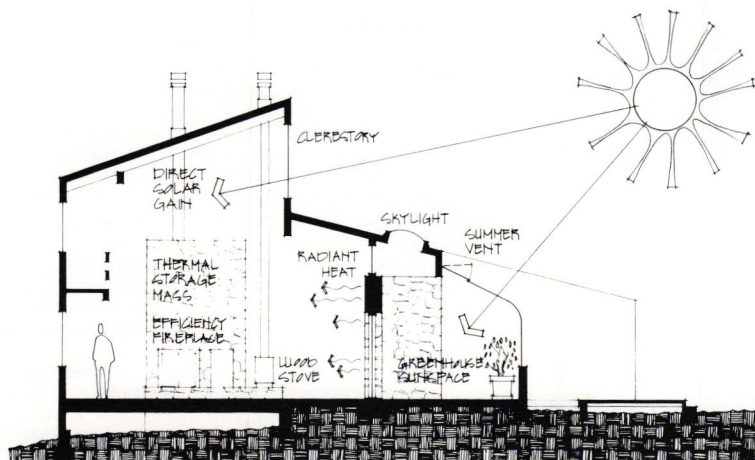
Architectural integrity is not maintained by simple mimicry of the past or strict obedience to one theme. Forcing architecture to be monolithic denies the human experience of progression and bastardizes our history by creating a false sense of time through suppression of change and variation.

*Barry Berkus, AIA
Berkus Group Architects*

Interview: David Wright, AIA

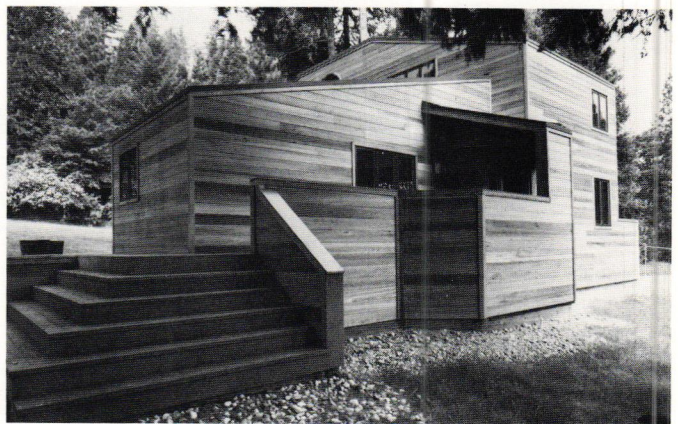
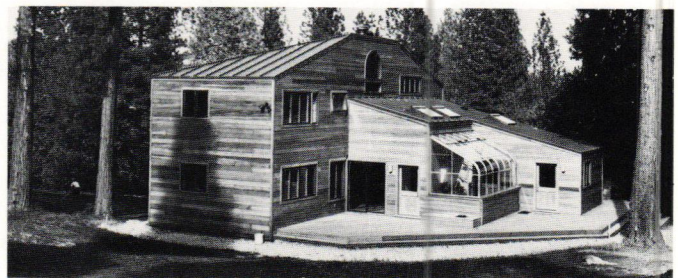


Floor Plans



Cross Section

Lee Residence, Cedar Ridge



Steve Solinsky

David Wright, AIA designs buildings that are in harmony with their environment, and with the people who use them. His nine-person office, tucked into a restored Victorian on the quaint main street of Nevada City, is packed with the sophisticated tools of his trade. Wright's practice reaches beyond the foothills of the Sierra Nevada Mountains to spots as diverse as Wyoming, Vermont, and Australia. Wherever he goes, he leaves behind passive solar, environmentally-integrated structures which showcase the beauty, efficiency and common sense of energy conscious architecture.

When did you become interested in passive solar and energy conservation?

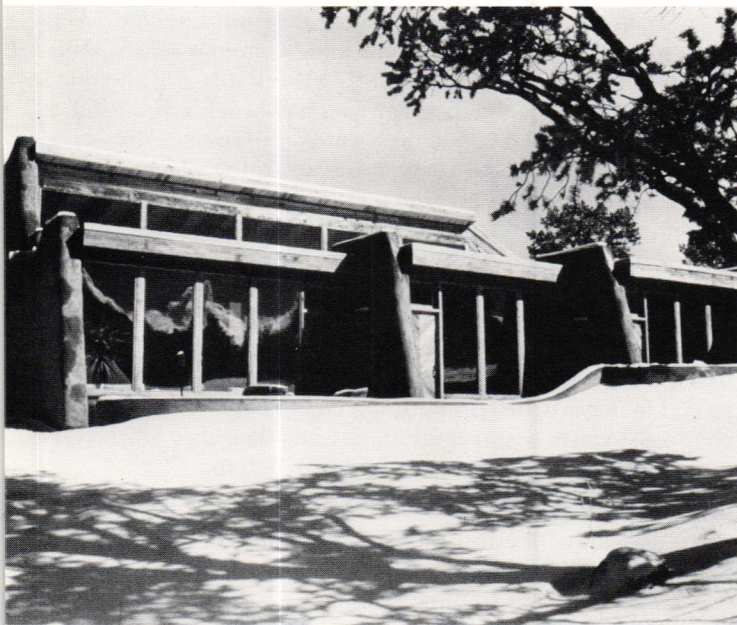
I was born and raised in Auburn, went overseas in the Peace Corps, came back, got my license in California and then moved

to Santa Fe. Solar was popular there before the rest of the United States had even heard about it. Pre-1973, we considered ourselves on the lunatic fringe of conservationists. After the Arab oil embargo, we suddenly became lunatic center. The whole modern concept of passive solar architecture started right in New Mexico in 1973 and 1974. I always considered myself an architect and a conservationist. But I never really consciously put the two together until I got interested in energy conservation. It opened up a whole new direction of architecture for me. All of a sudden architecture had much more validity.

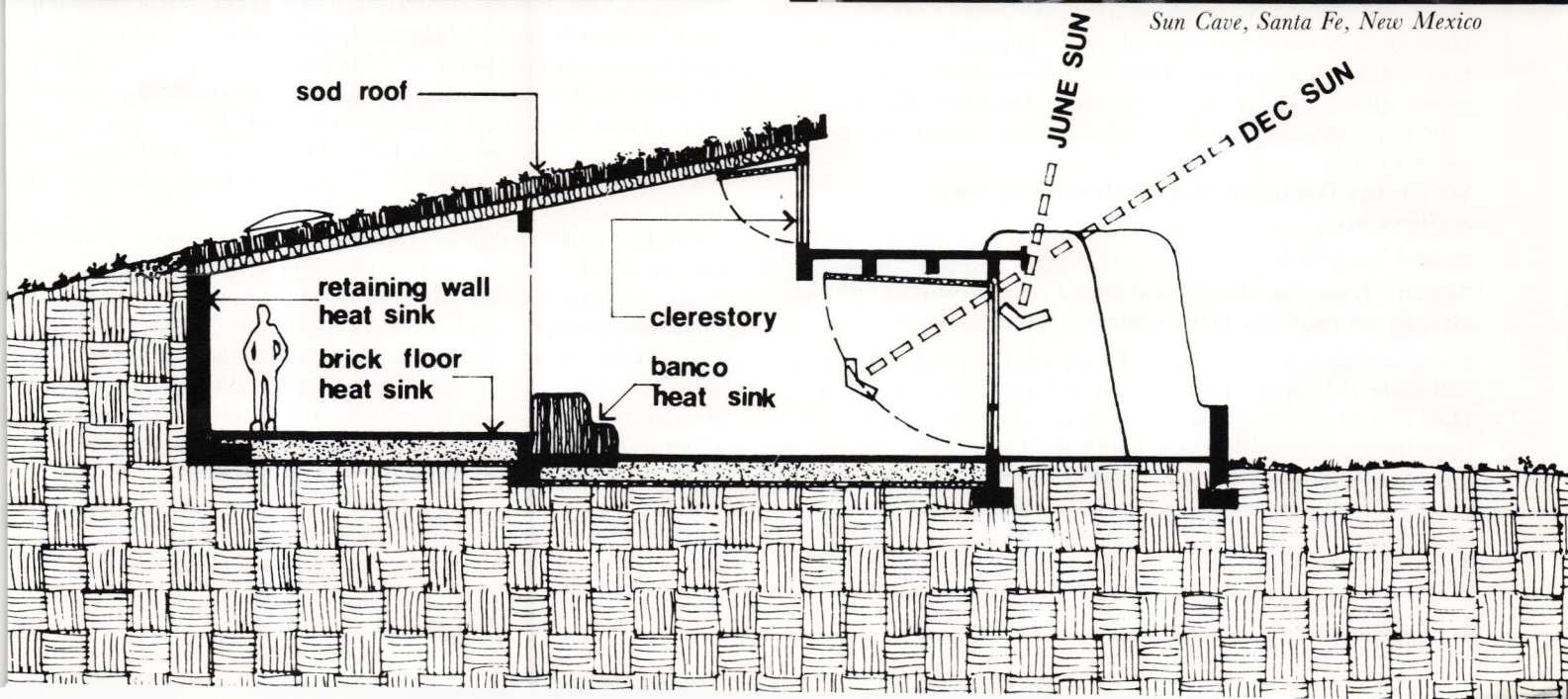
How does your specialization in solar environmental architecture shape your practice?

I don't do a building unless it is an energy efficient passive solar building. I never have had to solicit work. Everybody that comes to me is tuned in to what I do. All I have to worry about is whether they want Victorian or Cape Cod or Pueblo or international style architecture.

I've been stuck in the single family residential rut for the past eight years. I have done three condominiums for young builders or investors who wanted passive solar design. My



Sun Cave, Santa Fe, New Mexico



practice is taking a new direction. Within the past six months, I've had a chance to do a whole town in western Australia, a large office building and a large condominium project.

These are major investors who scoped out the marketplace, saw what the utility companies are doing with their energy rates, read what can be done in terms of designing a building for energy efficiency, and put it all together. Now that people are looking at a monthly utility bill that surpasses their mortgage rate, some developers see that energy efficiency is a real marketing tool.

How cost-effective is solar?

God or Cosmos has given us energy. It's ongoing, it's free, it's available, it's dependable. We know that every day of every year there is going to be a certain amount of this stuff. Every year there is a guaranteed amount that will fall on your body or on your house or on top of your car.

At a design seminar in San Diego, physicist Ted Taylor, who was head of the Orion Project, ran a lot of numbers for us about building and energizing a subdivision of 1,200 units. He showed us we could build our own self-generating plant, totally space conditioned, heat and power the houses—these were very fancy houses, half a million dollars and up—with



Sayre Residence, Applegate

cheaper first costs than we could if we plugged into San Diego Gas & Electric Company. Then he said we had to leave photovoltaic surfaces on each building because solar electric cells ultimately will be the cheapest energy source the world has ever seen.

Yet energy is a dead issue according to some architects...

A dead issue! It hasn't even started yet.

"Dead" from the standpoint that every architect should already be implementing energy considerations.

Every architect is not doing it. When solar happens, architects will make it happen. The tools are still just being designed. How can anyone say it is a dead issue when they don't even have the tools yet? Most architects don't even know the implications of heat exchangers, proper orientation and internal layout of buildings and solar devices. The rules for passive solar design are simple—they are simply good architecture. The master builders did it, the ancients used it, and so did

"Every time we design a building and have a conscience"

the Pueblo Indians. But we've forgotten many of those skills.

I was educated at one of the better schools in the world—Cal Poly, San Luis Obispo. I was taught mechanical systems. I was not taught passive environmental controls—about what turning a building 15 degrees can do to energy performance or to daylighting or to cross ventilation. We were exposed to the rules of thumb. We didn't indulge in the process of applying those tools. We looked at art, functions and structure. Those were the architectural aspects, the Bauhaus kinds of things. You did your building, and then you plugged in an AC system and told the mechanical engineer not to screw it up. That's still where most architects are at.

The problem is that architects, just like the rest of the building establishment, are slow to change, even though we think of ourselves as highly creative, excited people—artists. Well, when you get right down to it, established architects don't change things too fast, because they have a formula that works.

The funny thing is, energy efficiency and passive solar aspects make a better building, a more delightful building to be in. It's fresher, it's brighter, it has more common sense going for it than the air-conditioned box. I think it is a mistake to put people in a spaceship, when you have such a beautiful environment around you. Unless you live in smoggy downtown San Jose; then maybe a spaceship is the safest place to be.

You have to look at architecture on every scale and in every setting, urban or rural or in between. This gets down to microclimate design. Once you know where you are, what microclimate you are in, then there are a whole set of problem solvers, a palette of design choices, that you have at your disposal. It's up to the architect to choose the proper solutions based on a wider range of criteria than we've used in the past. The logic is there, and if anybody is open and thinks creatively, starts to put these things together, they start to see the patterns of democratic energy distribution.

What is "democratic energy distribution"?

I'll explain with a little story. In the four corners of the Southwest, there are vast coal reserves. Sometime back, investors decided that southern California needed a lot more energy, so they bought the coal rights from the Navajo Nation. They're strip mining to beat the band. They take the coal and burn it to make electricity. They get at best, I think, about 40 percent off those stacks. There's a pall of smoke that goes clear across New Mexico and on down into Texas—thousands of square miles of coal dust. It's a cloud in beautiful New Mexico, a cloud that's killing the Navajo Indians who live on the reservation.

So they make electricity and send it on big wires to California, at about a 60 percent line loss in generation. This stuff comes buzzing into Los Angeles and it goes into a garden apartment complex and is used to heat water. They're taking high quality energy, screwing up the environment, losing most of it along the way to heat water to take a shower in. And all the time, about three times more energy falls on the rooftop of a standard unit in Los Angeles than is needed to produce all of the energy needs of the apartment.

Every time we design a building, if we start thinking about where the water comes from and where it goes, and where the air comes from and where it goes... if we think things

g, if we think things through
we'll change our ways."

through and have a conscience, we'll change our ways. There is a chance for us to become better designers, better architects. I am not really a do-gooder. I'm just a normal everyday person who feels some responsibility for what I draw and get built.

What do you mean by "microclimate design"?

There are three scales of climate I look at when I design a project: macroclimate, microclimate and interior climate. Before I even conceive of a solution, I have to start on the outside and narrow it down. I start with the macroclimate, the general climate zone. A general climate zone would be the Sierra Nevadas, the Bay Area, the coastal range from Santa Rosa north to Redding. There are macroclimates in California that are very similar to macroclimates in the rest of the country. The big decision makers are wind, moisture, humidity, sunshine.

The microclimate is the specific site. First of all you have to know if you are in the suburbs, what side of town you are on, whether you are in the urban core, the renewal area. I look to see if the site has a north or south exposure. The exposure starts to dictate just how the exterior of my building is going to respond.

How do microclimate aspects go beyond what usually is done in site planning?

When I am breaking this down into microclimate design, I'm looking at a lot of different things. Lifestyle is a very important aspect. Somebody who lives in Alaska is going to have a different conception of comfort than someone who lives in Florida. The way people dress, their attitude toward hot and cold, urban/suburban, residential/nonresidential are microclimate design factors.

I really look at solar access. I always try to leave space to put in photovoltaic cells. I take my solar site selector out like Captain Solar and make grids before I've designed the building, so my engineer can determine where the BTUs are coming from—where they are problematic and where they are a resource. Once I determine that there is an area of the sky that's going to harvest solar energy, I designate that piece of sky as sacred. It becomes a fixed entity in the design process. I don't know if it is an array, a skylight, an active solar collector, or just a direct gain window yet, but I know that it's there.

Natural air currents are extremely interesting. In the mountains here, I know I can count on an upwelling during the daytime—heat rising, creating convection currents—and a reversal at night. So I know where the ventilation's going to happen. The way the storms come in the winter affects a solar design.

How does the microclimate design affect interior climate?

The interior climate may depend upon where the glazing is, whether there's a north facing skylight or a high transom or a clerestory, where the solar energy and cross ventilation is going to move through the building, and how all the spaces relate to these natural flows.

I put thermal mass in a building differently than somebody who's looking purely at structure, texture, form. I want it to attenuate sound. I want it to be a visually pleasant experience within the volume. I want it to be a fire-rated wall, and I want it to be a solar heat-sink. My placement of the thermal

mass starts to generate the interior function.

Then I look at volume and air flow: where do I draw the air off and where do I bring it back into a space so it doesn't blow papers off the desk? I look at how to equalize all of these things out. Maybe it means that I have ten air flow ducts that are driven off of one fan impeller. Maybe I'll have ten small fans so I can create proper zoning. I always bring energy related concerns to the normal architectural decisions. We use computer analysis to help proportion all aspects of the weather skin and the interior elements.

What are the tradeoffs that you give as a designer to use energy conscious design?

I always compromise in favor of aesthetics. A lot of people think of me as a solar architect, yet my point of view is that energy design tactics and tools are no more or less important than the floor plan, the interior volume—all the normal things that concern an architect. I find that making a building energy efficient and applying the passive solar design tools give a better aesthetic solution.

It sounds like you need new eyes to see and design these buildings.

You do need new eyes; at least you need some new circuits in



your old head. An energy building is like a flower—it is sitting in its place and metabolizing with the environment. It's tracking the sun. It knows what the sun is doing and allows the sun to work for it rather than just shielding itself.

The design aspects are extraordinary. It gives you a chance to think of new forms that mean a hell of a lot more than the old forms. Before, a building was something for drama, something for sculpture, something for image. Well, now it can do all those plus have another justification for its shape and its internal form. That takes architecture to another positive, more advanced level than what we have been doing for the last 50 years.

David Wright, AIA is principal of the firm SEAgrou, Solar Environmental Architecture in Nevada City. His first book, Natural Solar Architecture: A Passive Primer (Van Nostrand Reinhold Company, N.Y.) has been translated into five languages. Another book, Passive Solar Architecture: Logic and Beauty, will be published this November.

Toward a New Generation of Energy-Efficient Buildings

the forthcoming nonresidential energy regulations and the architect's role

by Wm. Stevens Taber, Jr., AIA

The project of revising the existing Title 24 Nonresidential Energy Standards is now in full tilt, with standards forthcoming for 22 building types and all California climate zones. The California Energy Commission (CEC) intends to alter the manner in which buildings are designed in a fundamental way, to work major changes in the design/construction process, and to do this through a cooperative effort with the regulated industry, replacing the customary political football of the standards-development process with a consensus-developing effort.

Since design professionals have had a few years to work with the existing nonresidential energy standards, a number of deficiencies have surfaced. First, the standards are not strict enough. The CCAIA has argued successfully that standards should be based not on historical practice, as the CEC first stated, but on the point of minimum life-cycle cost. The existing standards do not even remotely approximate this point. By their very nature, they probably are incapable of doing so. While most architects now design for minimum life-cycle cost, the vast majority of the buildings being built in California are designed by nonarchitects who lack the skills to understand these criteria, let alone design for them. Yet these very buildings will last for decades, and will constitute the bulk of the building stock in years to come, when energy will be much more expensive.

Second, the existing standards essentially are a prescriptive standard, addressing design criteria for the components of the building, rather than a performance standard addressing the design of the building as a whole. (There is a performance standard in the regulations, but it is largely unworkable.) This makes the standards incapable of approaching optimum cost-effectiveness, because the greatest potential for conservation lies in the design of the building, not its components. Indeed, a prescriptive standard inherently is incapable of approaching optimum energy use because, as it becomes more stringent, it becomes enormously

complex and ultimately unworkable.

Performance standards have several other advantages. By their nature, they require that the designer consider energy use while making decisions, and this has the advantage of improving the designer's skills. Also, performance standards are readily adaptable to local climates, industry conditions, and changing energy costs and policy, and can be dovetailed with a wide range of nonregulatory incentives for conservation.

Third, the standards by themselves are not enough. Our economy and society have evolved in an environment of cheap energy, and consequently have learned to waste energy and conserve other more expensive resources, such as labor. Now that the situation is reversed and we would like to conserve, we find in place a host of disincentives which frustrate even those who want to conserve. These disincentives include tax law, utility rate structures, land use planning policies, financing, and inertia. To change our habits of energy use will require more than regulations. It will require the dismantling of these marketplace forces.

How the new standards are being developed.

The new standards are being developed through the use of a generic building model, which describes to a computer the essential design characteristics of the building type under study, for analysis of its energy use. To this model are added a series of energy conservation measures. With each measure added, the life-cycle cost of the model is recalculated. When the analysis reaches the point of minimum life-cycle cost, the budget is established.

At that point, an important leap is taken. The performance budget becomes the basis of the standards, and a set of alternative prescriptive standards are developed based on the budget. Designers complying with the standards are free to design the building however they wish, if the building uses no more energy than

the budget. This constitutes a major breakthrough in energy standards, since it simultaneously raises the stringency of the standards to the optimum point and increases design flexibility.

The major difficulty with a performance-based standard is the method of demonstrating compliance. The existing performance standards require that compliance be demonstrated with a main-frame computer model. Although these tools are becoming increasingly accessible to architectural offices, they remain outside the mainstream of the industry.

The CCAIA has convinced the Commission and most of the industry that, for the standards to be workable, they must be promulgated with a simplified energy calculation method, so that designers of moderately sized projects can demonstrate compliance with a simple hand calculation or a hand-held, programmable calculator. Under urging from the CCAIA, the Commission has allocated \$380,000 to the development of this tool. Coupled with such a tool, the standards literally could make any designer capable of state-of-the-art, energy-efficient design, almost without training. This also constitutes a major breakthrough in standards development.

None of this would have been possible if the Commission had not undertaken a joint regulator-industry approach to standards development. Much of the creative thinking which has gone into this project has come from industry representatives. Because the standards are being developed in this environment, a great deal of the political furor that normally accompanies standards promulgation is being avoided.

What the new standards will mean to architects.

Of all the people designing buildings, the standards will have the least impact on architects, since the profession already is designing for higher standards of energy efficiency than the rest of the construction industry.

Buildings

making them

The standards will establish energy budgets for all major building types and all California climate zones at or near the point of minimum life-cycle cost, with some tolerance for local site conditions. They will require that all designers either design to the budget or incorporate into their design a set of prescriptive standards which will approximate the budget.

Architects will find themselves using these tools during design, as well as during permit applications and code checks, and in advising their clients about the projected energy use and life-cycle cost of their buildings. Architects probably will find themselves designing more daylight buildings, and paying more attention to orientation of glass. This may give architects a competitive advantage over designers with lesser skills, who have less facility in dealing with these concepts.

Over time, the standards will bring the building stock as a whole into line with the economic realities of the world today. In the decades since the advent of air-conditioning, we have learned to design buildings to exclude the outside world. In the coming decades, as our society and economy evolve toward more optimum levels of energy use, our buildings will become more intelligent, interact selectively with the environment to admit light and energy when it is benign, and return us to a closer awareness of our natural environment.

This approach will change architecture in a fundamental way, since these issues—light and energy—are central to our understanding and experience of the built environment. Our challenge as architects is to solve these problems in concert with all the other issues which make up architecture, discovering what, in the late twentieth century, constitutes commodity, firmness and delight.

CCAIA Energy Committee Chairman Steve Taber, AIA is an associate at ROMA, a San Francisco architecture, urban design and planning firm. He also serves as chairman of the Professional Advisory Group to the CEC on the nonresidential standards development project.

C L A S S I F I E D

Architecture California now accepts Classified Advertisements for positions available, positions wanted, services, business opportunities and miscellaneous.

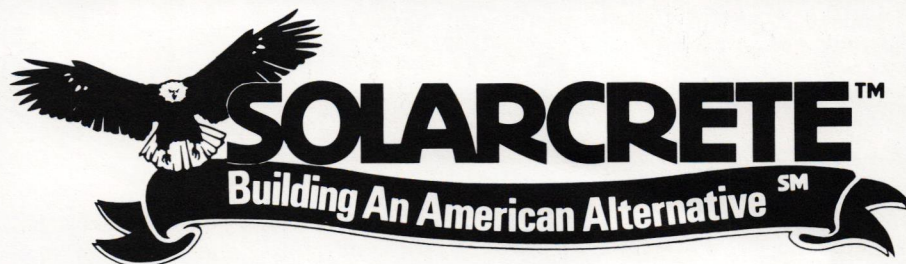
Rates: 80¢ per word, \$40 minimum. Payment must accompany the classified ad copy.

Address all ad orders to Classified Ad Department, *Architecture California*, 1414 K Street, Ste. 320, Sac-

ramento, CA 95814. Phone: (916) 448-9082.

Position Wanted

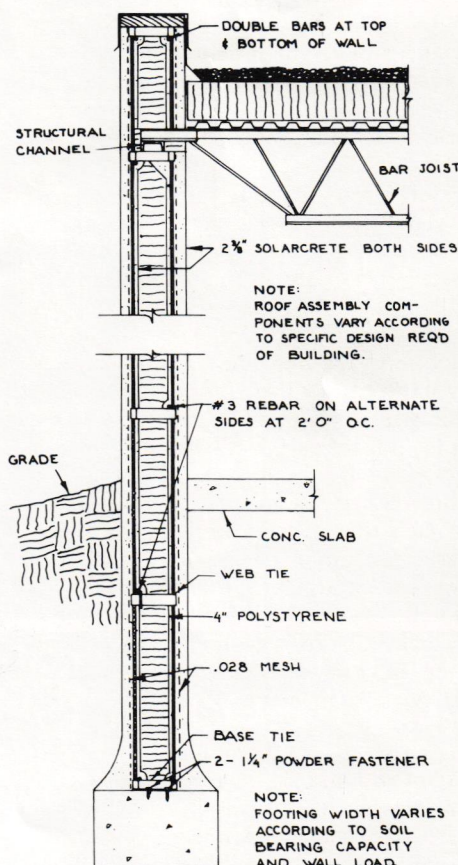
Registered Architect #C1198-11, 7 yrs. diversified experience, 6 yrs. as principal. Historic restoration and preservation, institutional, commercial, multi-family, master planning and zoning. Desires responsible position in established firm with growth opportunities. Western states or overseas preferred. Resume on request. Write to: Donald Grover, AIA, 20280 Sommette Dr., Sonoma, CA 95370.



The Solarcrete System features the following advantages:

- Highly energy efficient (offering R-Values of 19-37).
- Low maintenance requirement (reinforced concrete construction).
- Cost competitive with conventionally built structures.
- Unlimited design versatility (inherent with the patented building technique).
- Low insurance requirements (Two (2) hour fire rating and a seismic three (3) rating).
- Applicable in all building markets (residential, commercial, industrial, agricultural, rehabilitation).
- Optional BTU management system (solar assisted with no auxiliary units required).
- Major building code approvals.
- Reduced Noise Pollution through inherent soundproofing.
- Resistance to termites, vermin, moisture, mold and rot.

The Solarcrete Building System is extremely flexible and without the use of costly conventional form work offers an on-site building technique or a pre-cast, pre-assembled technique depending on the project requirement. The resultant insulated, reinforced concrete composite section can be used for many engineered applications.



Write for Free Brochure

RHS Construction, Inc.

10398 Rockingham Dr., Unit #12, Sacramento, CA 95827 • Phone (916) 362-4108

MAYER, TAYLOR
& ASSOCIATES

Rec'd

JUL 22 1982



ARCHITECTURE CALIFORNIA

California Council, the American Institute of Architects
1414 K Street, Ste. 320, Sacramento, California 95814

Bulk Rate
U.S. Postage
Permit No. 2538
PAID
Sacramento, CA

C01065
ROBERT J MAYER
MAYER/TAYLOR ARCHITECTS
2919 1/2 MAIN ST
SANTA MONICA CA 90405
AIA

\$18/6 ISSUES

Architecture California pinpoints the problems, solutions and leading ideas in California architecture. Now available to non-CCAIA members by subscription.